MATERIALDATA SYSTEM

Material Data System (IMDS) User Manual

Version 9.0

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For help with questions not answered in this manual please review the public pages on our internet site:

http://www.mdsystem.com → IMDS Information pages

- Under FAQs (Frequently Asked Questions) you may find answers related to your problem which are not explicitly mentioned here, as the FAQ pages are updated more frequently.
- Under News you can find information about changes in a new IMDS release.
- On our IMDS Advanced Solutions pages (https://public.mdsystem.com/web/imds-public-pages/imds-training-courses) under IMDS Training you can register for classroom or in-house training.
- Technical requirements for using IMDS can be found under
  ➔ IMDS Information Pages → IMDS System → System requirements

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1.10	Jul-15-2015	Change email address and phone number for Service Center Americas

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1 IMDS – General introduction

By the year 2015, as a result of legislation in some parts of the world, it is expected that 95% of an automobile will be recyclable. Any company which wants to re-use 95% of a vehicle in accordance with these legal requirements must already understand the exact content of the entire vehicle.

In the future, national and international environmental legislation may require every supplier of a product to be responsible for the product for its entire life (operations, use, removal, disposal etc.), Examples of these legislations include the EU Directive on End-of life vehicles, hazardous material legislation etc. In addition to this, suppliers may have to provide information about all materials used in the product to permit deconstruction of the commonly used materials, provide input for scientific analysis of the composition, and provide classification of the levels of danger related to the materials. This requires a detailed knowledge of the composition of the materials used.

In a joint venture project, the companies Audi, BMW, DaimlerChrysler, Ford Motor Company, Opel, Porsche, Volvo, VW and EDS (EDS was acquired by HP in 2008, therefore now referred to as HP) formed the team “Material Datasheet EDI” (EDI = Electronic Data Interchange). This team uses Information Technology (IT) to collect the required material data sheet (MDS) information from all suppliers.

The concept was realised with the internet-based International Material Data System (IMDS). HP hosts this central, secure, cloud-based database that permits the Automobile manufacturers and parts suppliers to standardise the process and to enables efficient data collection. This concept supports just-in-time data collection. Over the years, the original team has expanded to include almost all automobile manufacturers regardless of where they are located.

2 IMDS – Getting started

2.1 Basic Requirements

To access IMDS the user needs an internet connection and a supported browser. Technical constraints make it necessary that the user please use one of the browser versions supported by HP (the user can find these versions on http://www.mdsystem.com → IMDS Information Pages → IMDS System) e.g. the Microsoft Internet Explorer Version 8.0 or Firefox in its current version. There may be other browsers and versions that will work with IMDS, but the Helpdesks can only assist if the user has issues while using the supported browsers. In all cases, in the internet options of the browser, the user must enable Java Scripting. If their browser does not have the correct options enabled, the user will not be able to perform required actions within the application. In IMDS, as with many other transactional web applications, browser navigation keys and buttons such as "Back" interrupt the IMDS system control and do not have the desired effect. The user will need to use the IMDS buttons and functions within the main portions of the IMDS screens to navigate.

2.2 Company Registration

Note: Each company or company site is allowed one IMDS registration. This is done to prevent confusion within their own company and between their company and their customers and suppliers. We ask that the user check first with the IMDS Service Desk before registering their company online. Once registered, any Company Administrator can create users and other Company Administrators. As people within a company frequently change jobs or leave the company, we strongly suggest a minimum of two (2) Company Administrators per IMDS company.

A company can be registered on our homepage: IMDS Information Pages → IMDS Login → Registration → Register your company.

General information on Registering can be found on our IMDS Information Pages.

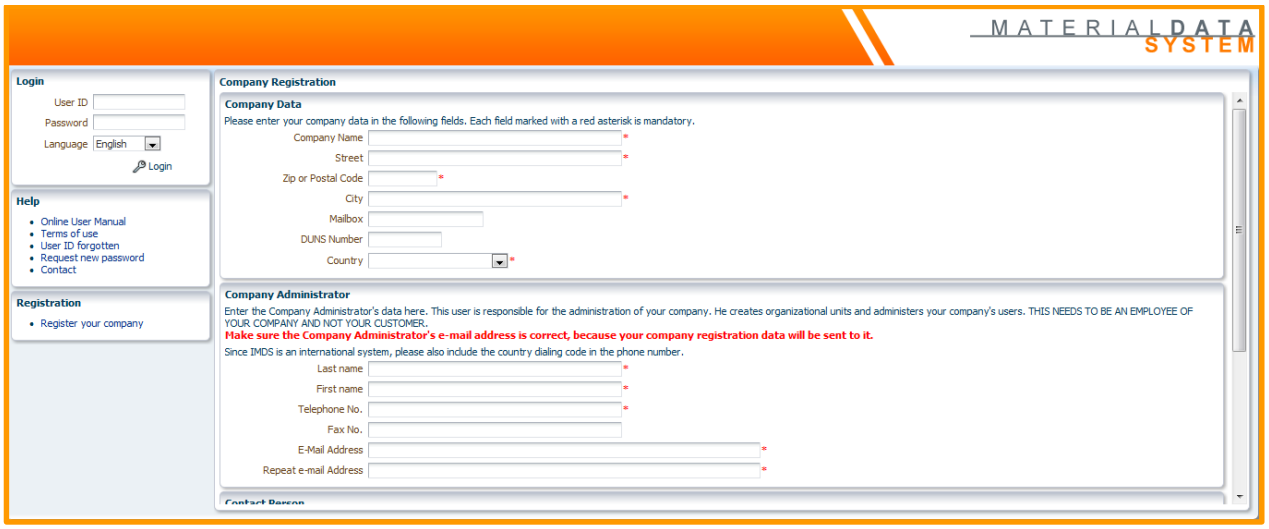

MATERIALDATA SYSTEM
Login
User ID
Password
Language English
Login
Help
Online User Manual
Terms of use
User ID forgotten
Request new password
Contact
Registration
Register your company
Company Registration
Company Data
Please enter your company data in the following fields. Each field marked with a red asterisk is mandatory.
Company Name
Street
Zip or Postal Code
City
Mailbox
DUNS Number
Country
Company Administrator
Enter the Company Administrator's data here. This user is responsible for the administration of your company. He creates organizational units and administers your company's users. THIS NEEDS TO BE AN EMPLOYEE OF YOUR COMPANY AND NOT YOUR CUSTOMER.
Make sure the Company Administrator's e-mail address is correct, because your company registration data will be sent to it.
Since IMDS is an international system, please also include the country dialing code in the phone number.
Last name
First name
Telephone No.
Fax No.
E-Mail Address
Repeat e-mail Address

Figure 1 – Company Registration screen

The person registering the company can enter the company data and one Company Administrator at this time. All fields with a red * are required. When the form is submitted, the system will check whether another company with the same name is already registered. This operates only if the name matches exactly character for character, and should not be relied upon to determine whether their company is already registered. For those companies wanting to centralize their compliance operations, we have a "deny list" which rejects any submission that contains a restricted word or phrase.

It is strongly recommended that the person registering the company be the initial Company Administrator as the system will e-mail the registration information, including a link to the ID, to the Company Administrator. If the Company Administrator is not the one registering the company, they are likely to ignore or delete the message.

Note: Please ensure the e-mail address field is filled with the correct address as this is where the confirmation mail is sent. User IDs are assigned to individuals and not to companies. The only authorized user of the ID also has the names and e-mail address associated with the ID. We require each person working in IMDS have their own User ID.

On the same page, a Contact Person must be named. The Contact Person and the Company Administrator can be different. A Contact Person may not have a User ID and a User may not be a Contact Person. The correct Contact Person is the person in a company (legally) responsible for IMDS data.

Contact persons are company-wide contacts, i.e. there is no contact person assigned to Organisation Units.

After completing the fields and clicking **"Next",** a window is displayed asking the user to confirm the registration request in IMDS. After accepting in this window, the user will see a screen with their IMDS Credentials: User, ID, Password, Company ID, Company name. Please copy the IMDS credentials and store them in a safe place. **They will not be displayed again,** so make sure to copy them correctly.

MATERIALDATA SYSTEM
Login
User ID
Password
Language English
Login
Help
Online User Manual
Terms of use
User ID forgotten
Request new password
Contact
Registration
Register your company
IMDS Credentials
Please copy your IMDS credentials below and store them in a safe place. They will not be displayed again, so make sure you copy them correct.
User ID gihca001
Password mib4ecjh
Company ID 32452
Company Name IH My Test Company
Next you will receive an e-mail containing a link to activate your new company in IMDS. After that you can use your user ID and password to log in the IMDS application.
Please be aware that the link can only be used once and will get invalid after 2 weeks for security reasons.
I confirm that I have copied the above IMDS credentials.
OK

Figure 2 – IMDS Credentials

After the person registering the company confirming the IMDS credentials are copied, this person will receive an e-mail containing a link to activate the new company in IMDS. **The Company Administrator will need to use this URL to activate the company before any user can log into IMDS.** From that time, the Company Administrator may use the user ID and password to log in the IMDS application. The following is an example of the e-mail the Company Administrator will receive after registering a company. Please note that the e-mail is sent from the IMDS system and the user may have to work with their IT department to ensure delivery to their inbox. Sometimes these are blocked at the firewall level and sometimes they are routed to the junk or spam folder. As this e-mail is sent from a computer, it cannot respond to a request to click on a link and enter a set of characters to allow the e-mail to go through.

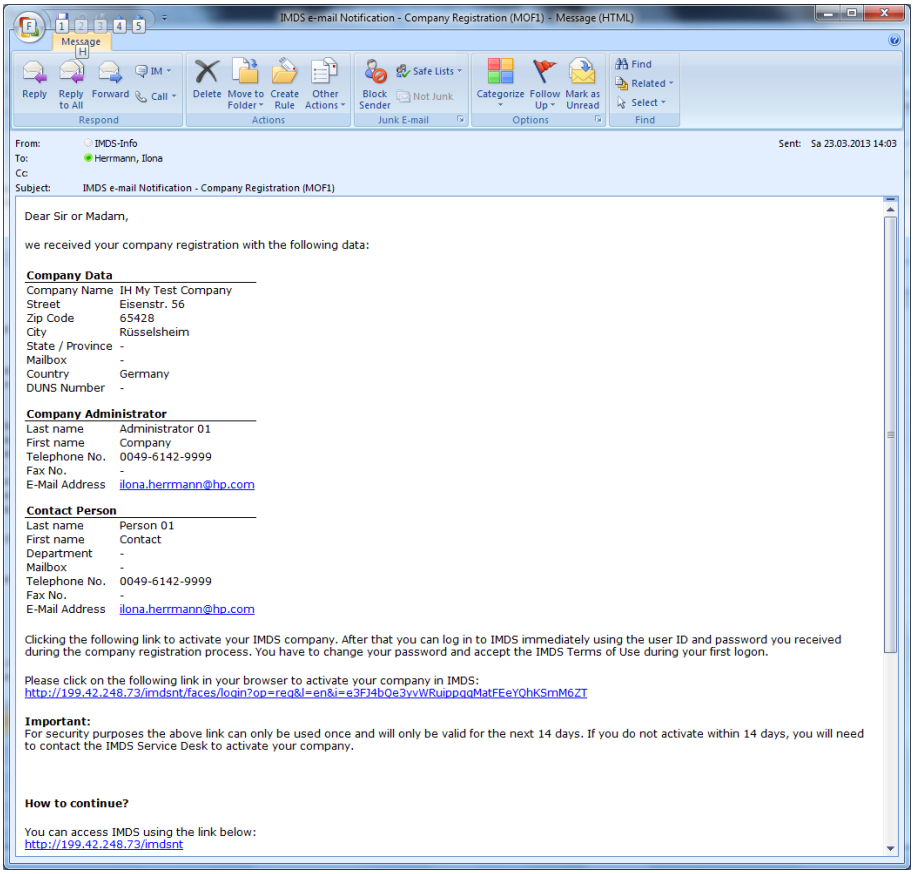

IMDS e-mail Notification - Company Registration (MOF1) - Message (HTML)
Message
Reply
Reply to All
Forward
IM
Call
Respond
Delete
Move to Folder
Create Rule
Other Actions
Actions
Block Sender
Safe Lists
Not Junk
Junk E-mail
Categorize
Follow Up
Mark as Unread
Options
Find
Related
Select
Find
From: IMDS-Info
To: Herrmann, Ilona
Cc
Subject: IMDS e-mail Notification - Company Registration (MOF1)
Sent: Sa 23.03.2013 14:03
Dear Sir or Madam,
we received your company registration with the following data:
Company Data
Company Name IH My Test Company
Street Eisenstr. 56
Zip Code 65428
City Rüsselsheim
State / Province -
Mailbox -
Country Germany
DUNS Number -
Company Administrator
Last name Administrator 01
First name Company
Telephone No. 0049-6142-9999
Fax No. -
E-Mail Address ilona.herrmann@hp.com
Contact Person
Last name Person 01
First name Contact
Department -
Mailbox -
Telephone No. 0049-6142-9999
Fax No. -
E-Mail Address ilona.herrmann@hp.com
Clicking the following link to activate your IMDS company. After that you can log in to IMDS immediately using the user ID and password you received during the company registration process. You have to change your password and accept the IMDS Terms of Use during your first logon.
Please click on the following link in your browser to activate your company in IMDS:
http://199.42.248.73/imdsnt/faces/login?op=reg&l=en&i=e3FJ4bQe3yvWRuippqqMatFEeYQhKSmM6ZT
Important:
For security purposes the above link can only be used once and will only be valid for the next 14 days. If you do not activate within 14 days, you will need to contact the IMDS Service Desk to activate your company.
How to continue?
You can access IMDS using the link below:
http://199.42.248.73/imdsnt

Figure 3 – IMDS Company Registration e-mail

Note: Some e-mail applications will insert a carriage return instead of wrapping the URL. If the URL doesn't work, there are probably random characters on the line below the URL. These are part of the key. Copy both lines into an application that does not modify the content such as Windows Notepad and remove the paragraph mark between the two lines to re-create the correct URL, then click it**.**

When the users access this URL, they have the option to activate or cancel the registration with IMDS. If the user elects to cancel, they will not be able to return to the URL and accept.

Note: The User has 14 days to access the URL sent. If the URL has not been visited for 14 days, it is no longer accessible.

The following figure shows a typical Company Activation page.

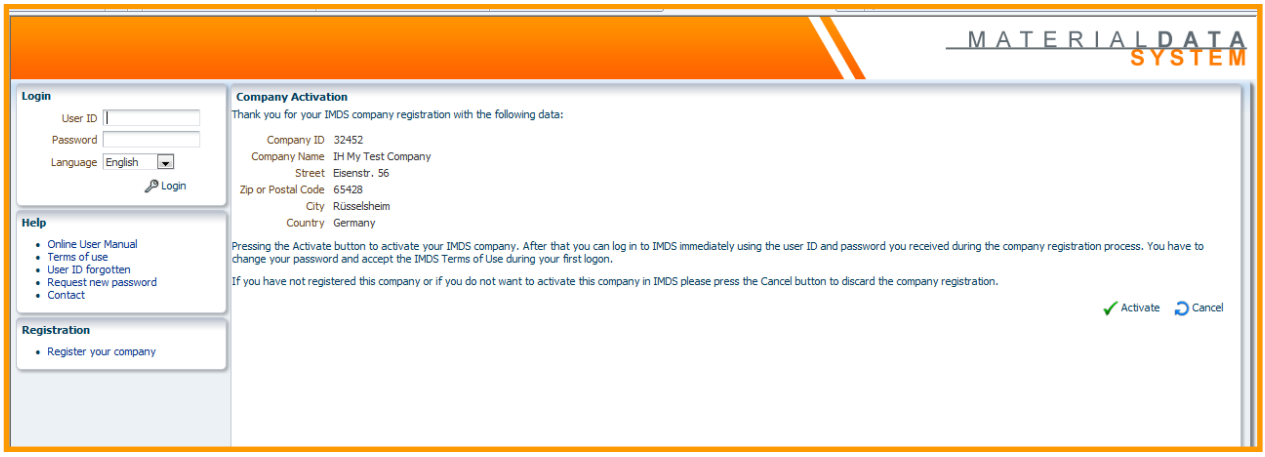
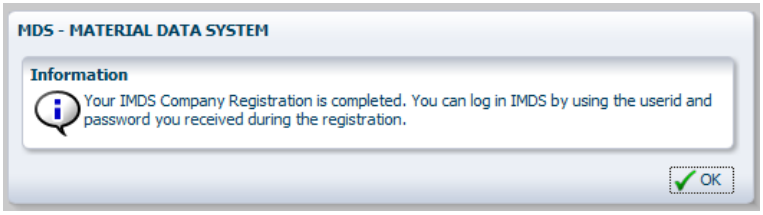

MATERIALDATA SYSTEM
Login
User ID
Password
Language English
Login
Help
Online User Manual
Terms of use
User ID forgotten
Request new password
Contact
Registration
Register your company
Company Activation
Thank you for your IMDS company registration with the following data:
Company ID 32452
Company Name IH My Test Company
Street Eisenstr. 56
Zip or Postal Code 65428
City Rüsselsheim
Country Germany
Pressing the Activate button to activate your IMDS company. After that you can log in to IMDS immediately using the user ID and password you received during the company registration process. You have to change your password and accept the IMDS Terms of Use during your first logon.
If you have not registered this company or if you do not want to activate this company in IMDS please press the Cancel button to discard the company registration.
Activate
Cancel

Figure 4 – Activation / Cancellation of Company Registration

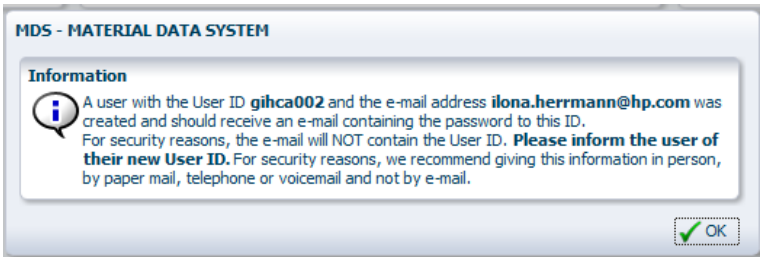
By clicking **"Activate"** the IMDS Company Registration is completed, and the user can log in IMDS by using the User ID and password received during the registration.


MDS - MATERIAL DATA SYSTEM
Information
Your IMDS Company Registration is completed. You can log in IMDS by using the userid and password you received during the registration.
OK

A Company Administrator is now allowed to and responsible for:

- Creating users for (only) their own company
- Changing user profiles within their company
- Resetting passwords for their users
- Assigning contact persons for their company
- Deactivating users that have left the company
- Ensuring there is always a minimum of one company administrator available in the IMDS company (including vacations and leaves of absence)
- Accessing the MDS specific statistics for the user IMDS company

Every time a new user is created, the Company Administrator sees a window with the User ID and the associated e-mail address. A temporary password is generated and sent by e-mail directly to the new user. This e-mail only contains the new password, not the User ID – so it is necessary that the Company Administrator informs the user about his IMDS user ID.


MDS - MATERIAL DATA SYSTEM
Information
A user with the User ID gihca002 and the e-mail address ilona.herrmann@hp.com was created and should receive an e-mail containing the password to this ID.
For security reasons, the e-mail will NOT contain the User ID. Please inform the user of their new User ID. For security reasons, we recommend giving this information in person, by paper mail, telephone or voicemail and not by e-mail.
OK

Each new user must read and accept the IMDS Terms of Use at first login.

Note: Each user has the capability and responsibility to maintain their e-mail and phone number. The Company Administrator can also maintain this data. For system security, all users must use their own ID, user name, and email address. Password resets will only be communicated to the e-mail on the ID.

2.3 System Access

The IMDS system is accessed from the IMDS Information web pages: **www.mdsystem.com.**

After navigating to the IMDS Information Pages, the user will find several tabs at the top of the page. Under **Help**, the user will find our Frequently Asked Questions (FAQs) which presents answers to common questions. The following picture presents the IMDS homepage.

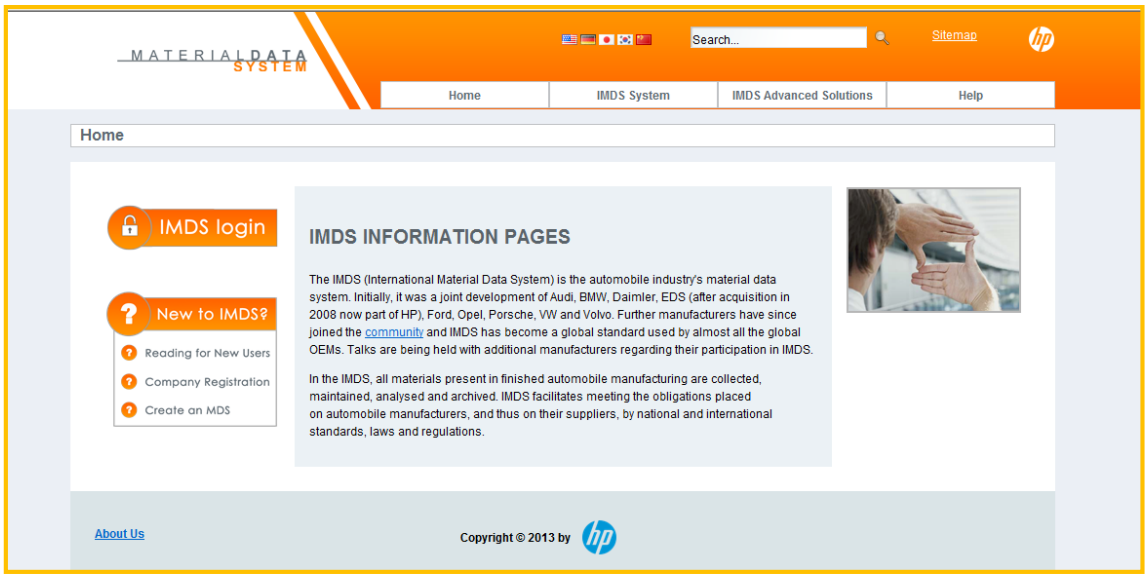

MATERIALDATA SYSTEM
Search...
Sitemap
Home
IMDS System
IMDS Advanced Solutions
Help
Home
IMDS login
IMDS INFORMATION PAGES
The IMDS (International Material Data System) is the automobile industry's material data system. Initially, it was a joint development of Audi, BMW, Daimler, EDS (after acquisition in 2008 now part of HP), Ford, Opel, Porsche, VW and Volvo. Further manufacturers have since joined the community and IMDS has become a global standard used by almost all the global OEMs. Talks are being held with additional manufacturers regarding their participation in IMDS.
In the IMDS, all materials present in finished automobile manufacturing are collected, maintained, analysed and archived. IMDS facilitates meeting the obligations placed on automobile manufacturers, and thus on their suppliers, by national and international standards, laws and regulations.
New to IMDS?
Reading for New Users
Company Registration
Create an MDS
About Us
Copyright © 2013 by

Figure 5 – IMDS Information Pages

Login

Once on the IMDS Information Pages, click the button "IMDS Login" to access the IMDS system.

The following figure depicts a typical view of the IMDS login page.

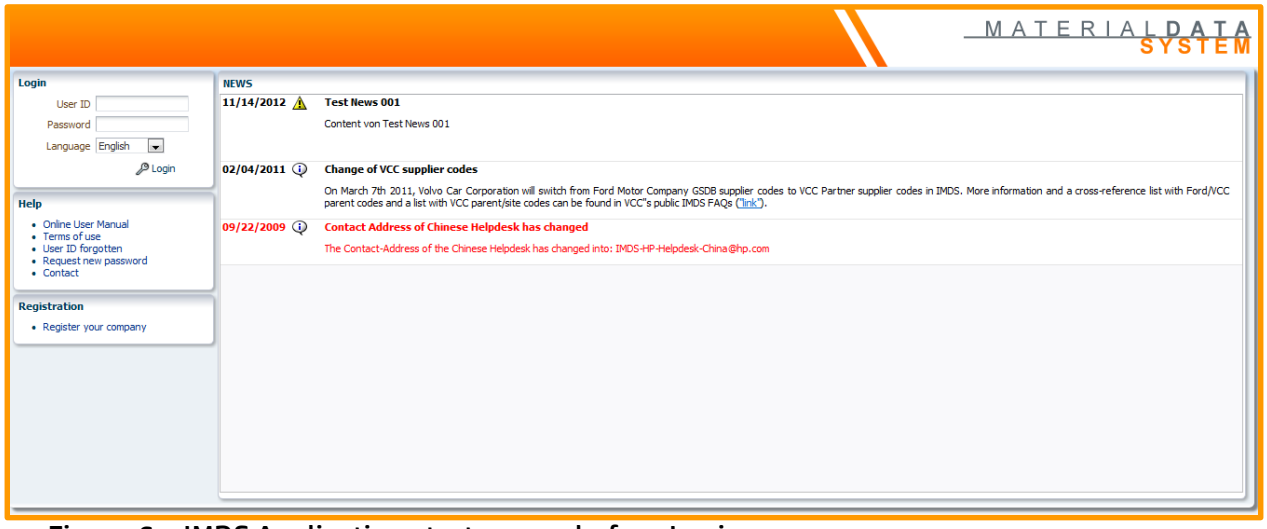
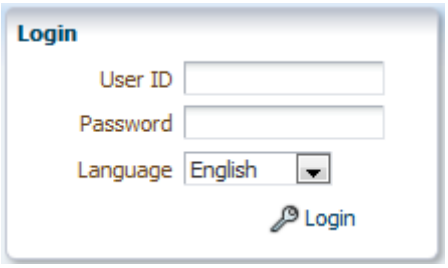

MATERIALDATA SYSTEM
Login
User ID
Password
Language English
Login
Help
Online User Manual
Terms of use
User ID forgotten
Request new password
Contact
Registration
Register your company
NEWS
11/14/2012
Test News 001
Content von Test News 001
02/04/2011
Change of VCC supplier codes
On March 7th 2011, Volvo Car Corporation will switch from Ford Motor Company GSDB supplier codes to VCC Partner supplier codes in IMDS. More information and a cross-reference list with Ford/VCC parent codes and a list with VCC parent/site codes can be found in VCC's public IMDS FAQs (link).
09/22/2009
Contact Address of Chinese Helpdesk has changed
The Contact-Address of the Chinese Helpdesk has changed into: IMDS-HP-Helpdesk-China@hp.com

Figure 6 – IMDS Application start screen before Login

At this point, the user enters their User ID and password. The User ID is **not** the same as the Company ID which is numeric. User IDs follow a pattern comprised of information from the company name and user assigned to the ID. User IDs usually contain 5 lower case letters followed by 3 numbers. User IDs and passwords are case sensitive (meaning SPRING or Spring is not the same as spring). To avoid lockouts, we suggest at first login that the user copy (<CTRL><C>) and paste (<CTRL><V>) from the e-mail. System generated passwords only contain lower case characters and numbers. They will not contain o, 0, l, or 1.

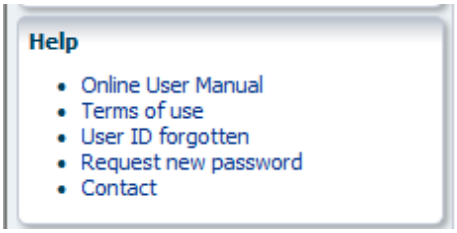
Prior to logging in, the user may select the language in which the prompts appear. Currently available languages are: English, German, Chinese, French, Italian, Japanese, Korean, Portuguese and Spanish. It should be noted that although the field prompts are presented in different languages, all field entries must be made in English, as this is the agreed-upon language of IMDS. Additionally, IMDS does not translate field entries from one language to another.



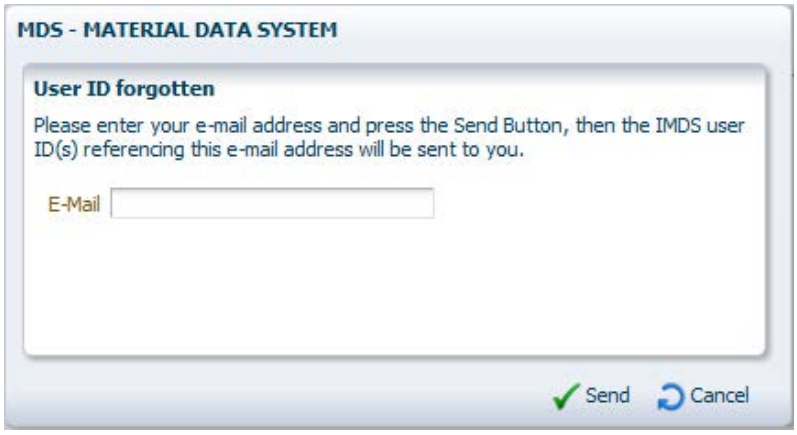
2.3.1 User ID Forgotten / Request new password

Anyone may occasionally forget the ID and/or password, especially if the user does not enter the system frequently. IMDS has built in functionality to assist users in retrieving their ID and resetting their password. However, the most important information is the e-mail address associated with the ID in the system. It is imperative that the user keep their e-mail address current within the system.

If the user has forgotten the ID, the user can easily retrieve their User ID(s) from the IMDS Application login screen by using the User ID Forgotten link as shown below.



When using the link, the user will be asked to enter their e-mail address:


MDS - MATERIAL DATA SYSTEM
User ID forgotten
Please enter your e-mail address and press the Send Button, then the IMDS user ID(s) referencing this e-mail address will be sent to you.
E-Mail
Send
Cancel

And the system will send the user a list of all User IDs associated with their e-mail address. Once the user has the ID, the user can then use the **Request new password link** to reset the password.

When the user uses the link, a window similar to the following will appear:

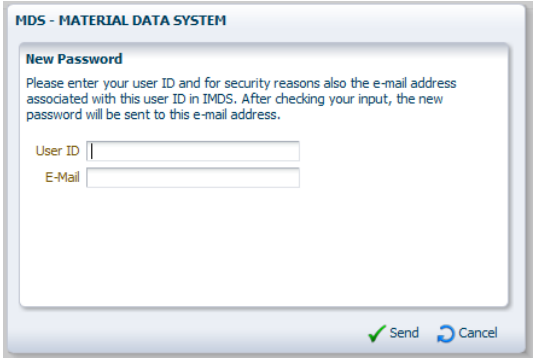

MDS - MATERIAL DATA SYSTEM
New Password
Please enter your user ID and for security reasons also the e-mail address associated with this user ID in IMDS. After checking your input, the new password will be sent to this e-mail address.
User ID
E-Mail
Send
Cancel

Figure 7 – Request new password screen

When the user requests a new password, the correct e-mail address for the ID needs to be entered. This e-mail address **has to match the e-mail address already available in the system** for this User ID in order to be able to reset the password.

The system performs a check and, if it is allowed (i.e. the ID is not expired and the user has had a successful login since the last password reset), a new password will be sent to the e-mail address associated with the ID in the system. We strongly suggest that since the system-generated password will be a random string of characters, the user copy/paste from the e-mail into the password field. The user will need to change the password at first login (see 2.3.3).

If the user get an error message, then either the ID is incorrect, the user does not have the correct e-mail address for the ID, the ID is expired, or the user has not had a successful login since the last password reset. This last check is to prevent the user from constantly requesting a password reset when the user cannot receive e-mails from the system. If the user is having issues receiving e-mail from the IMDS server, then she/he should work with the IT department and the **User ID Forgotten** link to trace why the user cannot receive e-mails from the system. If the user cannot receive e-mails from the IMDS system, the user cannot use the system.

2.3.2 Accept the Terms of Use

At first login (using the temporary password received by e-mail), a user must accept the Terms of Use and change the temporary password in order to proceed. The following figure shows the typical Terms of Use screen.

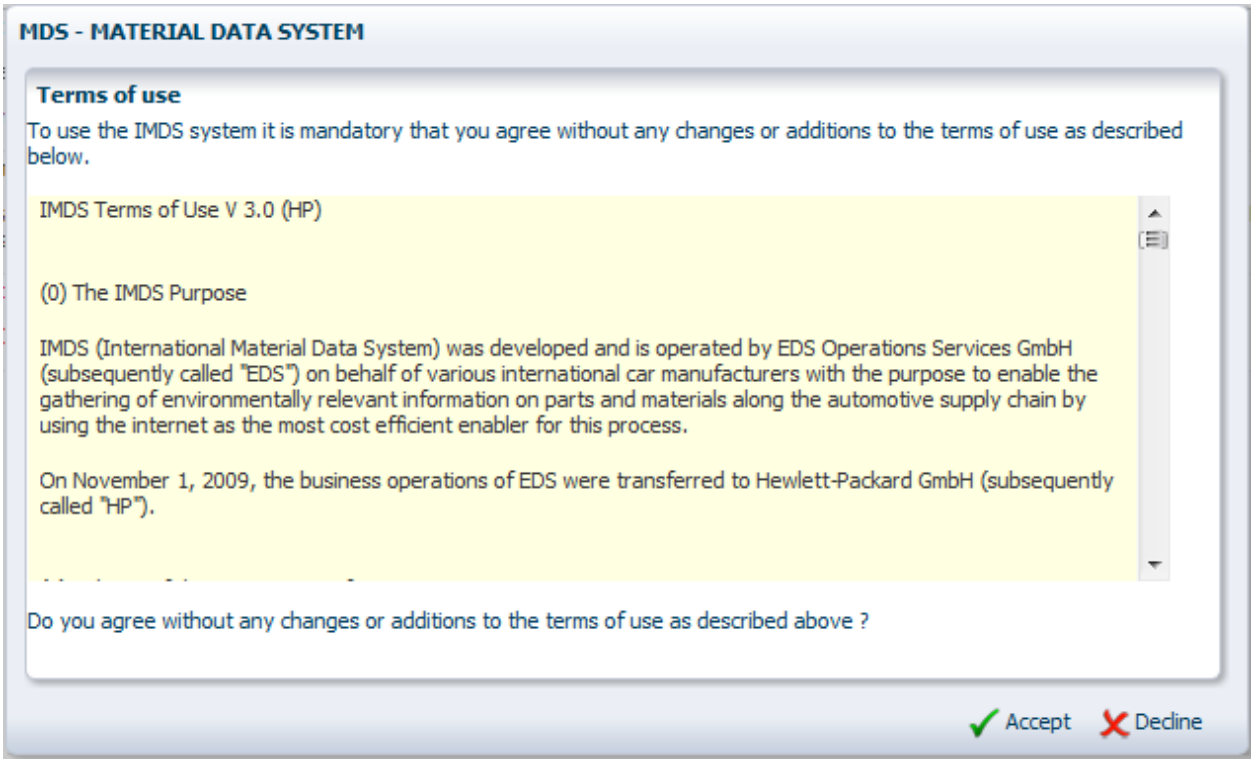
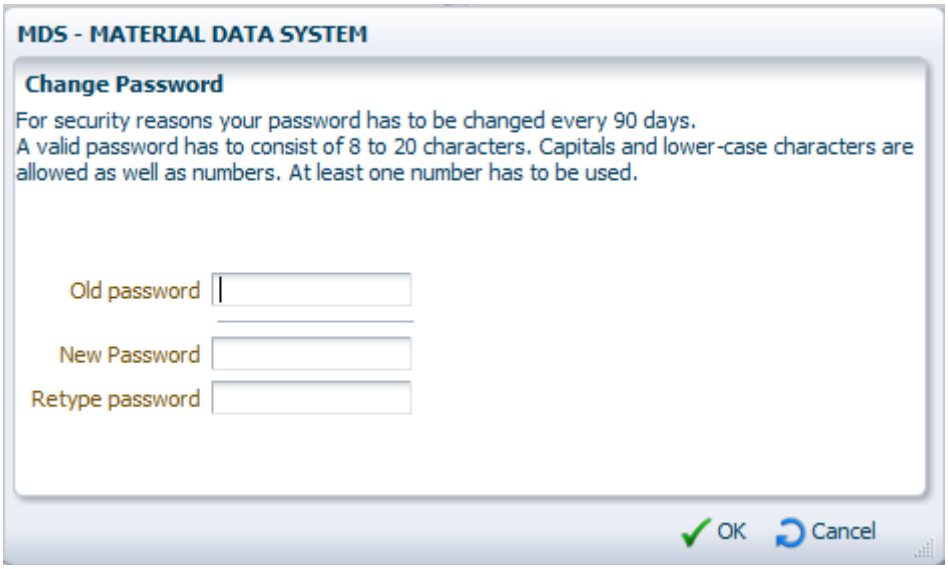

MDS - MATERIAL DATA SYSTEM
Terms of use
To use the IMDS system it is mandatory that you agree without any changes or additions to the terms of use as described below.
IMDS Terms of Use V 3.0 (HP)
(0) The IMDS Purpose
IMDS (International Material Data System) was developed and is operated by EDS Operations Services GmbH (subsequently called "EDS") on behalf of various international car manufacturers with the purpose to enable the gathering of environmentally relevant information on parts and materials along the automotive supply chain by using the internet as the most cost efficient enabler for this process.
On November 1, 2009, the business operations of EDS were transferred to Hewlett-Packard GmbH (subsequently called "HP").
Do you agree without any changes or additions to the terms of use as described above ?
Accept
Decline

Figure 8 – Acceptance of the Terms of Use required

In some browsers or some screen resolutions, the user may need to scroll to the right to view the Accept and Decline buttons. The user will need to **Accept** after **reading** the Terms of Use to proceed. **Decline** takes the user back to the IMDS start page and the user will not be able to use IMDS.

2.3.3 Change Temporary Password

As a next step the user will have to change the initial password. The user may also change it through the **Administration > Change Password** option. For security reasons, the user will need to change the password at least every 90 days or after a system password reset (either through the "Request new password" from the IMDS login screen or by the IMDS Service Desk).


MDS - MATERIAL DATA SYSTEM
Change Password
For security reasons your password has to be changed every 90 days.
A valid password has to consist of 8 to 20 characters. Capitals and lower-case characters are allowed as well as numbers. At least one number has to be used.
Old password
New Password
Retype password
OK
Cancel

When changing the password, the user will have to enter the old password and create a new password. The password must be a minimum of 8 characters and can be up to 20 characters. Passwords may only contain ASCII or Latin 1 (ISO-8859-1) characters and must contain at least one numeric character.

2.3.4 Review and Acknowledge Notifications

If there are notifications, they will be displayed immediately after login and the user can decide to either mark them as read or to be displayed again at next login. The notification screen may not appear if the user had to change the password (will appear with the next login). The user cannot ignore this screen, the user MUST acknowledge that the user has read the message in order to proceed. The following figure depicts typical notifications.

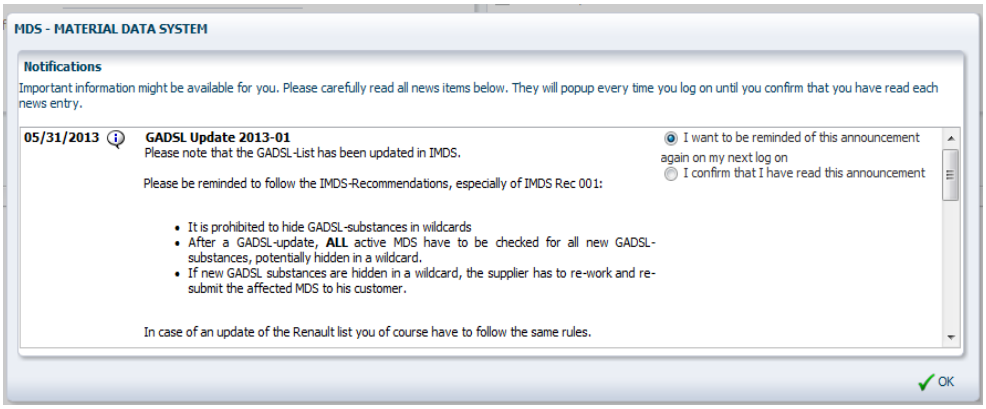

MDS - MATERIAL DATA SYSTEM
Notifications
Important information might be available for you. Please carefully read all news items below. They will popup every time you log on until you confirm that you have read each news entry.
05/31/2013
GADSL Update 2013-01
Please note that the GADSL-List has been updated in IMDS.
Please be reminded to follow the IMDS-Recommendations, especially of IMDS Rec 001:
It is prohibited to hide GADSL-substances in wildcards
After a GADSL-update, ALL active MDS have to be checked for all new GADSL-substances, potentially hidden in a wildcard.
If new GADSL substances are hidden in a wildcard, the supplier has to re-work and re-submit the affected MDS to his customer.
In case of an update of the Renault list you of course have to follow the same rules.
I want to be reminded of this announcement again on my next log on
I confirm that I have read this announcement
OK

Figure 9 – Notification screen

Once the user clicks <OK>, the user sees the IMDS main screen. The following figure presents the primary view of IMDS.

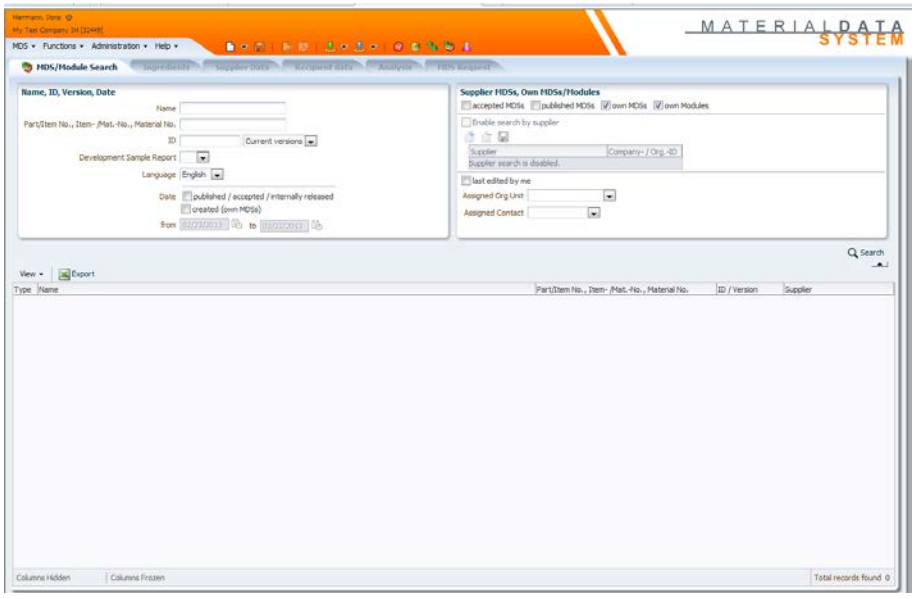


Figure 10 – IMDS application start page

2.3.5 Navigating IMDS

Once the user enters IMDS, the user will see a window that consists of several parts. The following figure illustrates the various parts.

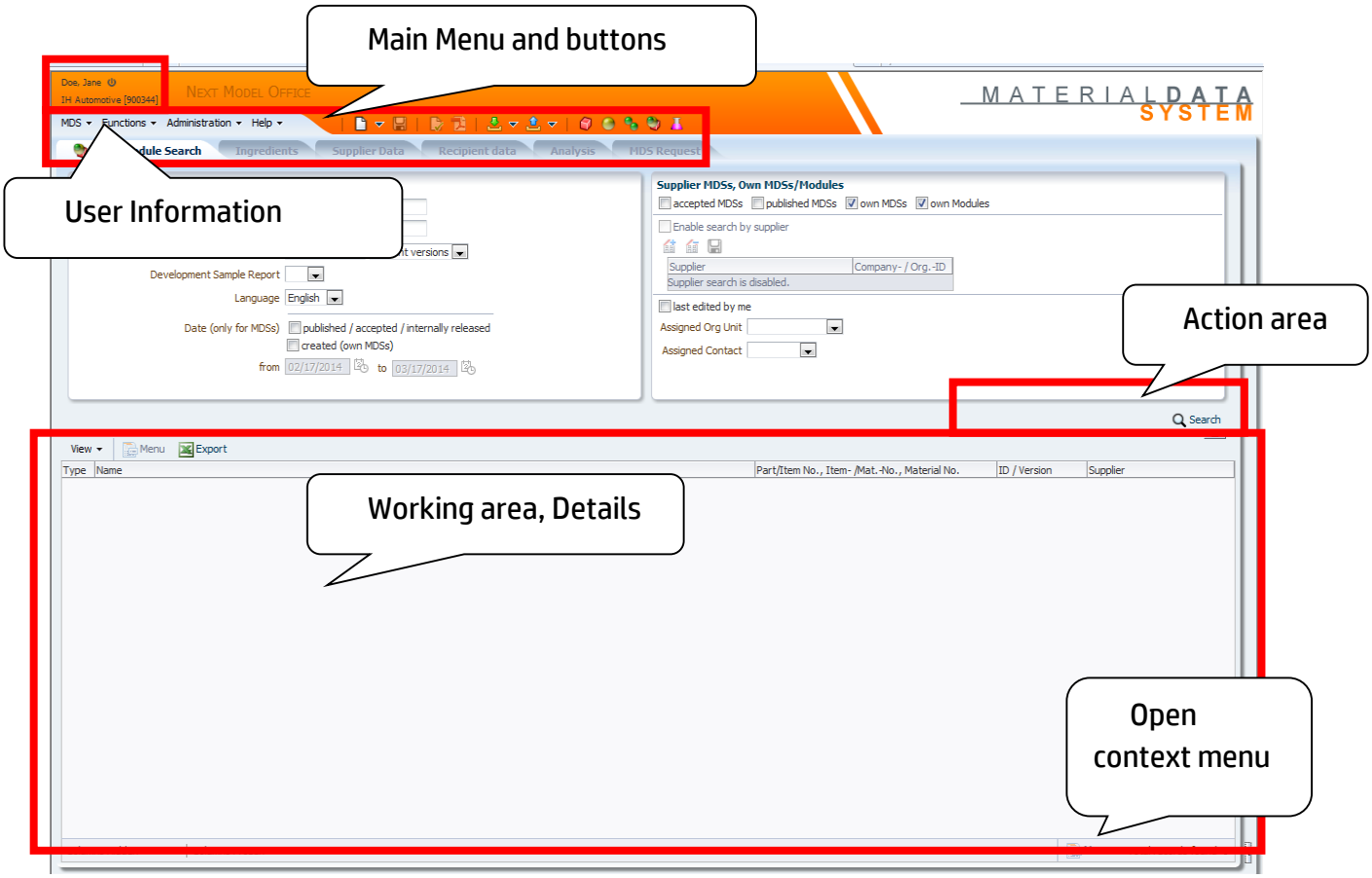


Figure 11 – Working areas in IMDS

User Information Area / Log off (upper left corner)

In this area of the screen the user's name and the company name and IMDS ID are displayed. For signing out, there is a Log-off button next to the User name.

Main Menu and Buttons

The Main Menu and Buttons present all options to which the user profile currently has access. This menu is interactive, meaning the cursor highlights the chosen menu options. Upon clicking

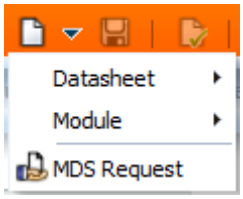
an option, the results will be displayed in the working area. Menu items which are not available at this time are displayed in faded color. The following section describes each of the menu items.

Context Menu

By right clicking or using the "Menu" command at the bottom right all actions available for the respective entry in the result list are displayed in the Context Menu.

MDS Menu/Toolbar Buttons

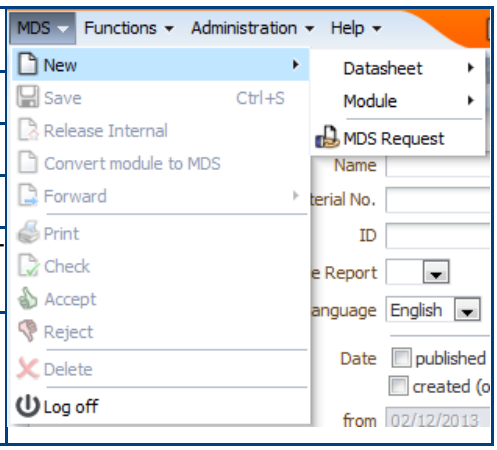
These functions are available under the MDS menu item:



New

The user can either use the MDS > New menu item or the button in the toolbar. The button will allow a menu to appear which contains the same actions as the **MDS > New** option in the menu. From the button on the toolbar:

Menu Item	Description
Component	Create and opens a new component MDS.
Semi-component	Creates and opens a new semi-component MDS.
Material	Creates and opens a new material MDS.
Module	Creates and opens a new module – either component, semi-component or material.
MDS Request	Creates and opens a new MDS request.



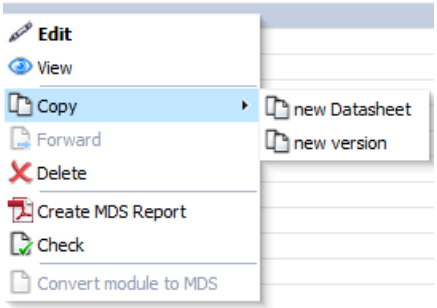
Save

Save can either be accessed from the MDS > Save menu item or by using the button in the toolbar. This button will not appear unless the page on which the user is working can be saved.

This function saves the currently open data. Use this function to save MDSs, requests, organization units, users, etc.

Copy

The following table describes what each of the items under **Copy** does (accessible by right-clicking):

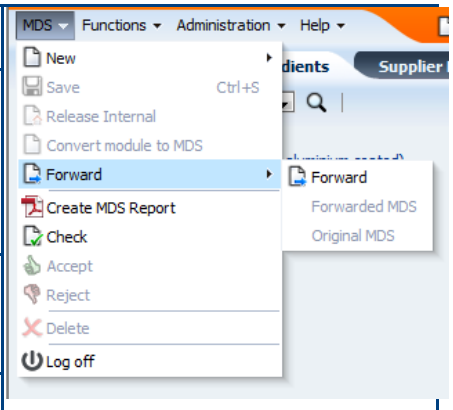
Menu Item	Description	
New Datasheet	Only available when editing an MDS. Saves a changed MDS to a new MDS ID. The previously opened MDS is not modified.	
New Version	Only available when editing an MDS. Saves a changed MDS to a new version for the same MDS ID. The previously opened MDS is not modified. The user cannot create a New Version of an MDS that was not created by their IMDS company.	

Release internally

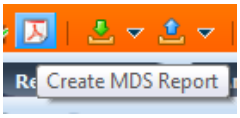
Only available when editing an MDS. Releases the MDS internally, so it can be used in other MDSs (referenced) created by the own company.

Forward

The following table describes the options available under **Forward**:

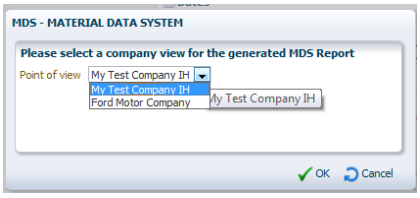
Menu Item	Description	
Forward	Only available when viewing an accepted MDS for which the sender has permitted forwarding. Creates a forwarding copy of the MDS that can be sent to other recipients but cannot be modified in the ingredients tree. **This function can be used only one time per accepted MDS.**	
Forwarded MDS	Only available when viewing an accepted MDS that has already been forwarded. Opens the forwarding copy of the MDS.	
Original MDS	Only available when viewing a forwarding copy of an accepted MDS. Opens the original accepted MDS.	

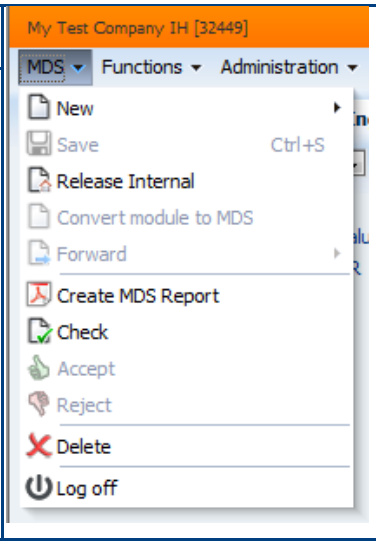
Print

The user can either use **MDS > Create MDS Report** or the button on the 

toolbar to access this function.

This menu item allows the user to print an MDS report from the data of the MDS either with a view on the data of the own company or the company this MDS is sent to:



Menu Item	Description	
Create MDS Report	Only available when viewing or editing an MDS. Creates an MDS Report for the MDS. The MDS Report lists the substances of assemblies and materials contained within the MDS.	

Check

Only available when viewing or editing an MDS. Performs a check on the MDS and reports all found issues. The Check function may also be initiated by using the button in the toolbar.

Accept

Only available when viewing a received MDS that has not yet been accepted, rejected or cancelled. Brings the Accept/Reject buttons into view so the MDS can be accepted.

Reject

Only available when viewing a received MDS that has not yet been accepted, rejected or cancelled. Brings the Accept/Reject buttons into view so the MDS can be rejected.

Delete

Deletes the currently viewed data. This might be an MDS, an MDS Request or an organization unit (*only available for Company Administrators).* This option is not available for received MDSs. Additionally, the user cannot delete any data that does not belong to the own company.

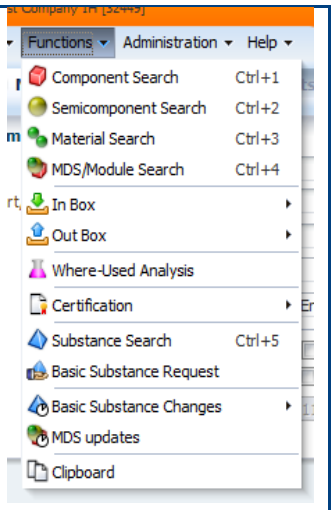
Log Off

Logs the user off IMDS and opens the log in / news page. The user may also Log Off by using the button on the upper right of the window.

Functions Menu/Buttons

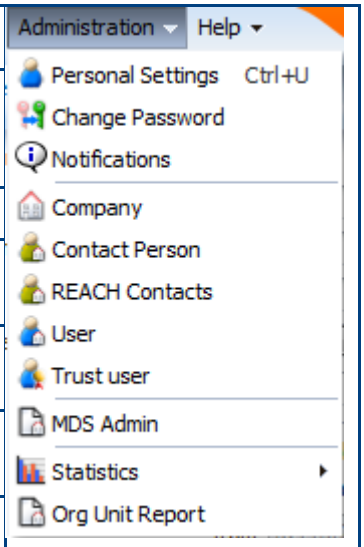
The Functions menu gives the user a list of functions that can be used in IMDS. Most of these also have a button on the toolbar. These functions are detailed in the following table:

Menu Item	Description
Component Search	Opens the search screen for component MDSs (own, accepted and published).
Semi-component Search	Opens the search screen for semi-component MDSs (own, accepted and published).
Material Search	Opens the search screen for material MDSs (own, accepted and published).
MDS/Module Search	Opens the search screen for all MDSs (own, accepted and published) and for own Modules.
In Box	Opens the search screen for received MDSs and MDS Requests.
Out Box	Opens the search screen for sent MDSs and MDS Requests.
Where-Used Analysis	Opens the analysis screen allowing to find MDSs with specific contents.
Substance Search	Opens the search screen for substances.
Basic Substance Changes	Opens the search screen for changes to Basic Substances.
Basic Substance Request	Opens the search screen for Basic Substance Requests.
MDS updates	Opens the screen for updating MDSs
Clipboard	Opens the Clipboard.



Administration Menu

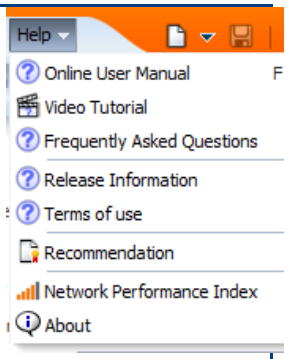
The Administration Menu contains options that are associated with company administration. Depending on the User Profile, not all options may be available. The following table explains what options are available this menu.

Menu Item	Description	
Personal Settings	Shows all data of the user such as e-mail address and phone number and allows him to change his personal information.	
Change Password	Allows the user to change his password.	
Notification	Shows all currently visible and not yet confirmed notifications.	
Company	Only available to Company Administrators. Opens the search screen for organization units of the user's company.	
Contact Person	Only available to Company Administrators. Opens the search screen for Contact Persons.	
REACH Contacts	Only available to Company Administrators. Opens the search screen for REACH contacts	
User	Only available for Company Administrators. Opens the search screen for users within the user's company.	
Trust User	Only available for Company Administrators. Opens the search screen for trusted and distrusted users in other companies. Allows the company administrator to trust or distrust them.	
MDS	Only available for Company Administrators. Opens the MDS Administration screen allowing the company administrator to move multiple MDSs from one organization unit to another.	
Statistics	Only available to Company Administrators. Shows MDS specific statistical data for their company.	
Org,-Unit Report	Shows all Org,-Units of the own company without having users assigned	

Help Menu

The Help Menu items are described in the following table:

Menu Item	Description
Online User Manual	Opens the User Manual (pdf file) in a new window.
Video Tutorials	Shows a list of Video Tutorials available for the different functions
Frequently Asked Questions	Links to the FAQ section on the IMDS Information pages
Release Information	Opens the the Release Information for the current IMDS Release (pdf file) in a new window.
Terms of Use	Opens the IMDS Terms of Use (pdf file) in a new window.
Recommendations	Lists all Recommendations including all previous versions in a separate screen.
Network Performance Index	Can be used to measure IMDS performance in relation to the own network / PC
About	Shows information about the current version of IMDS.



Information/Details

The Details area is where input is inserted or is shown.

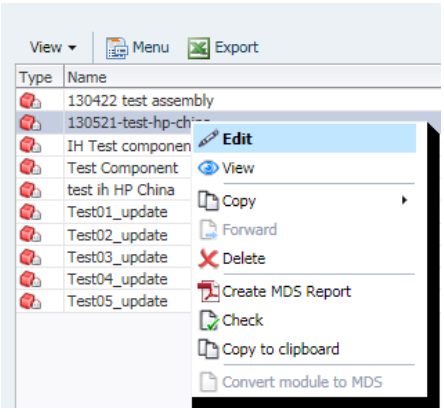
Action Area

In this area the buttons Search, Cancel, Create etc. are located. Clicking on the buttons in this area produces result lists below this area or lists details of an MDS Request, MDS, IMDS user etc.

Shortcuts from the Search Results Windows

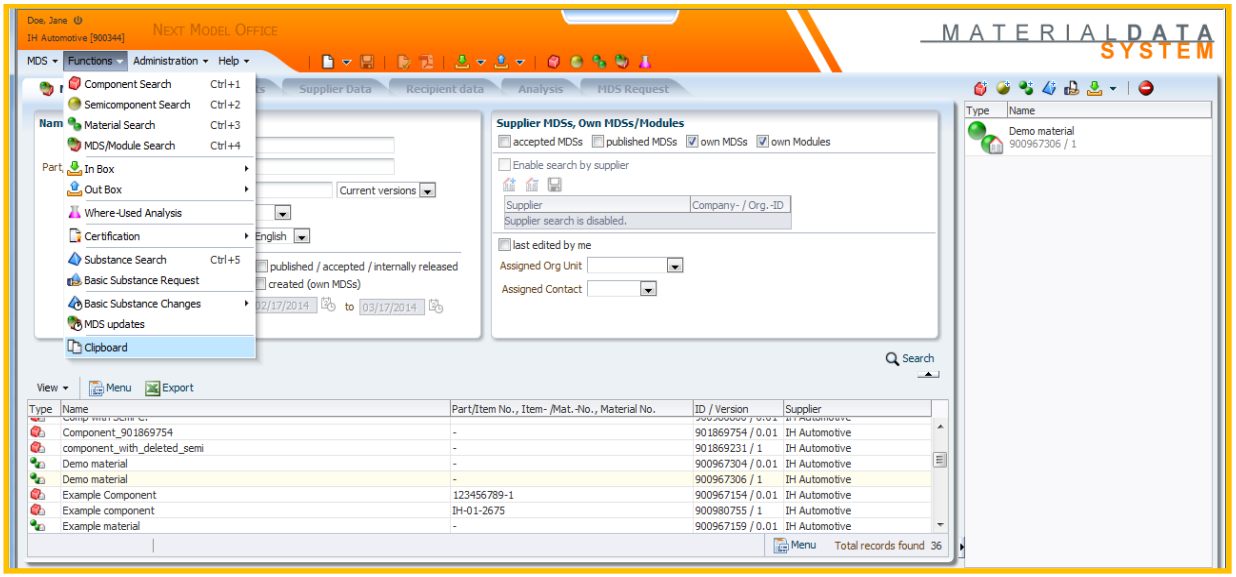
In addition to all of the above-mentioned buttons and menu items, if the user highlight an MDS in a Search Results screen and right-click, the user will have available shortcuts to frequently used functions such as the menu below generated from a component search:

Alternatively, you can click on **Menu** to open the context menu.



Clipboard

The Clipboard function can be used to hold material datasheets, basic substances and requests for easy access. For example, an often used material can be moved into the Clipboard for reuse in different material datasheets. If you login to IMDS, you can open the Clipboard using the menu **Functions > Clipboard**. It will be shown at the right hand side of your window:



Next time you login, the Clipboard will be still visible with all the information retained from your last session. You can reuse your favourite data from the clipboard without searching again.

If you don't need the Clipboard visible for a portion of the time you are working in IMDS, you can use the small arrow at the bottom left-hand corner of the clipboard screen to collapse it. To remove an entry from the Clipboard, please use the context menu (right mouse click). To remove all entries, use the "Remove All" icon at the top of the Clipboard.

3 Material Data Sheet (MDS)

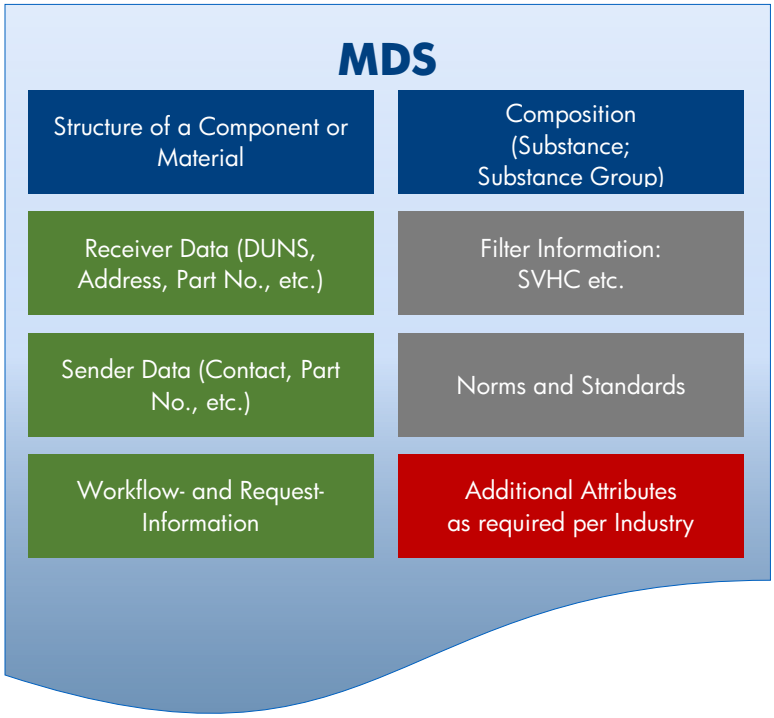
3.1 MDS Introduction

3.1.1 What is an MDS?

The Material Data Sheet, or MDS, is a core element of IMDS. As the name "material data sheet" implies, an MDS is an organized list of characteristics which describe a physical material. *In everyday language: if you think of everything we manufacture as having a "recipe", the MDS is the list of ingredients for the recipe, and their amounts.* Every company which uses IMDS will have occasion to create, edit, and manage MDSs. Even if a company only uses IMDS to "pass" information from suppliers to customers, they still need to create MDSs to attach (reference) a supplier MDS and send to a customer.

It is important to distinguish between a Material Data Sheet (MDS) and a Material Safety Data Sheet (MSDS). MDSs require 100% of the materials in the final form, and do not include volatiles present in the raw form.

An MDS can be thought of as a container holding pieces of information, as shown here:


MDS
Structure of a Component or Material
Composition (Substance; Substance Group)
Receiver Data (DUNS, Address, Part No., etc.)
Filter Information: SVHC etc.
Sender Data (Contact, Part No., etc.)
Norms and Standards
Workflow- and Request-Information
Additional Attributes as required per Industry

An MDS is somewhat analogous to a document in Microsoft Word. Just as a Microsoft Word document is a container that holds text, tables, illustrations, etc. organized into headers, footers and bodies, with specified format, size, font, etc., an IMDS MDS is a container which holds components, materials and basic substances organized into a tree-like structure with specified names, part numbers, norms and standards, weights, etc.

3.1.2 Version Control

An MDS typically evolves over time, so every MDS is managed under “version control”. Please take the time to understand version control, or IMDS will be very frustrating to use. The mechanics underlying MDS version control is complex, but the fundamentals are easy to understand with a few basic rules:

An MDS version may be “editable”, “released”, or “archived”.

- When editable, an MDS version may be changed, but cannot be used in other MDSs, or (normally) shared outside your company.
- When released, an MDS may not be changed, but may be used in other MDSs and shared outside your company.
- When archived, an MDS is no longer active. It may be viewed or copied for use in a subsequent version, but is no longer editable. It can be shared, as is sometimes necessary when providing a “service part” for an older model.

An MDS has a version number. This number is presented in the format “XX.YY”.

1. The XX represents the “Release” portion of the MDS version. This indicates how many times the MDS has been released, or made non-editable.
2. The YY represents the “Edit” portion of the MDS version. This indicates how many times the MDS has been changed since it was last released.

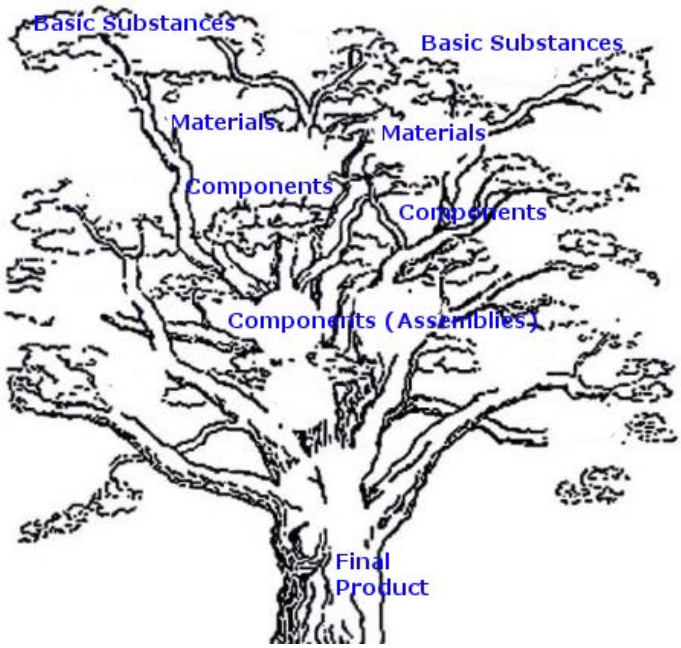
One can determine a lot about an MDS from the current version number. Some examples:

- Version 0.1 is the first draft of an editable MDS.
- Version 1.0 is the first released, un-editable version of an MDS.
- Version 3.5 is the fifth edit to the third released version of an MDS.

3.1.3 "Tree-like Structure"

IMDS models the composition of an automobile as a tree-like structure as shown in this drawing, with the following representations:

- Leaves represent basic substances.
- Twigs represent materials.
- Small branches represent components.
- Branches represent smaller assemblies.
- Main branches represent main assemblies.
- Trunk represents final products (vehicles).



3.1.4 MDS "References"

An automobile contains thousands of materials and tens of thousands of components. It would be nearly impossible to create a single MDS for even a large assembly. Thus, IMDS allows a large MDS to "include by reference" the MDSs of the items "higher" in the tree.

To illustrate, consider the following imaginary but representative example:

Each auto manufacturer receives component assemblies from perhaps one hundred tier-one suppliers, each of whom provides an MDS for each component assembly. These MDSs are incorporated into a vehicle MDS by reference, resulting in a single "Component" vehicle MDS including one hundred "Component" MDSs.

Each of these tier-one supplier receives component assemblies and components from one hundred tier-two suppliers, each of whom provide an MDS for their components, which are in turn referenced by the tier-one MDSs, and thus included in the overall vehicle MDS.

In just two tiers, we have ten thousand MDSs included in the vehicle MDS, with each company having produced only one MDS. This continues down the tiers until all the components, the materials used to produce those components, and the basic substances used to produce those materials have been provided.

Of course, in the "real world", each company probably supplies more than one item, and therefore creates more than one MDS. Yet this example illustrates how the IMDS "referencing" structure permits identification of entire vehicle content without placing too high an overhead upon any individual company.

This concludes the introduction to MDSs. Each of the components of an MDS, and the details of how to use IMDS to create and maintain MDSs, are described in the following sections.

3.1.5 Updating MDSs

IMDS users have the possibility to identify supplier MDS updates when the supplier MDS is used within the user company's MDSs. This feature lists supplier updated MDSs and names the specific owned or published MDSs which reference an older version of the supplier updated MDS. This operates similar to a "where-used" analysis, except IMDS automatically generates this content and it is displayed immediately when a user enters this screen and executes this search (default: search for all new supplier entries).

In the update screen, the user may search for specific IDs or names of parts, or filter the list for the MDS type (own/published/accepted). The search result is limited to 500 entries.

Note: Updates to this list are processed asynchronously (similar to the Where-used analysis). Therefore, changes are not immediately visible.

The update process is done in two steps. In the first step the update itself is done by replacing the old references with the new ones and executing a check afterwards. If the check result does not contain error messages, the MDS can then be released. Otherwise, the MDS can be processed manually to correct the errors. For convenience, multiple MDSs can be processed (updated and released) at once.

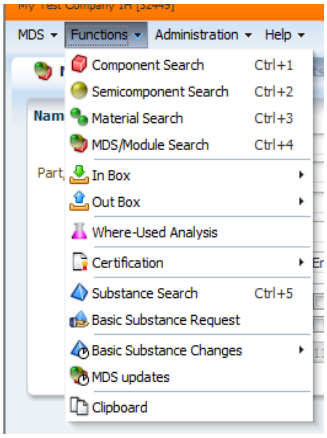
- The old version for published or owned MDSs is the previous version number
- The old version for accepted MDSs is the previously accepted version number

Every company can use the update search without running an analysis. Processing the list entries can be disrupted and continued later at any time until all entries are processed. The update list will only be generated for new updates which occur after this design has been implemented. There will be no retroactive analysis for legacy data updated in the past.

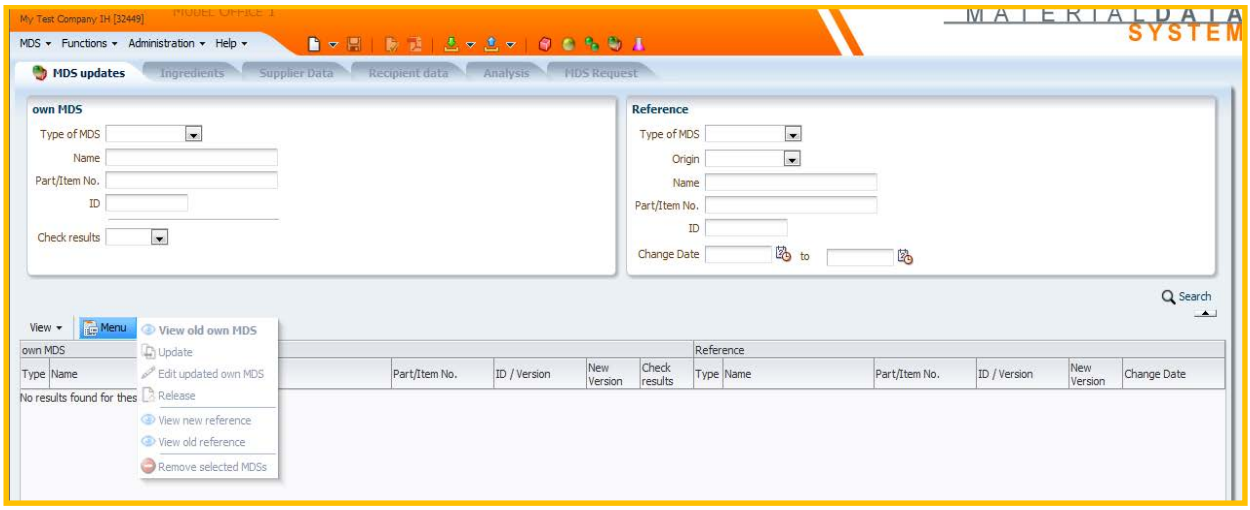
When using the new MDS update functionality to create new versions of MDSs, the updated references will be replaced accordingly. However, a new version can still be created with the

existing IMDS functionality. The check procedure will check if relevant updates of referenced MDSs are available. If this is the case, a warning message for the relevant referenced MDS will be displayed. When the system detects an old version and the user wants to replace it, the replace button will automatically locate the current and replace the old version with the current version.

The MDS update screen is integrated into IMDS in the Functions menu.



After the user selects the Functions -> MDS updates menu option, the MDS Updates screen is shown, providing information about the old and new version of an MDS and in which MDS(s) it is referenced. As with other IMDS screens, from the update list an MDS can be viewed and edited in different tabs.



Multiple release is possible: To update several MDSs at once, select several rows in the table by holding the control or the shift key during clicking. This multiple selection is then relevant for the update, release and remove actions. For all other actions (View current, Edit updated, view new/old reference), only one entry should be selected. If more than one is selected, the first entry will be used for the action.

Also, the old and new versions of the referenced MDS are displayed to permit user verification of the pending update. If the user decides that the change is not relevant and does not want to create a new version, he can remove the entry from the update list.

3.2 Basic Substances in IMDS

3.2.1 General Information

An IMDS Basic Substance is an elementary chemical building block. In the IMDS "tree-like" structure, basic substances comprise the "leaves" that occur at the end of every material "branch". Basic substances are created and maintained by the IMDS Chemical Service. Basic substances have universal characteristics such as name, CAS number, and EINECS number.

Every material in IMDS is ultimately comprised of Basic Substances, represented by . A basic substance can be either a chemical element (examples: iron, copper) or a standard compound (examples: acrylic resin, zinc oxide). Basic substances are defined by either a specific Chemical Abstract Number (CAS#) or generically by function. Generally, they fit in three distinct categories:

CAS-numbered basic substance – This is a basic substance with a CAS# assigned to it, meaning it is a clearly defined substance, example: Iron (CAS# 7439-89-6).

Pseudo-Substance – A pseudo-substance gives an accurate description of the substance or the substance group but does not have a CAS# assigned to it, example: "Acrylic resin". It is important to know these substances are accepted as real substances and are not considered as wildcards.

Joker or Wildcard – These substances do not define a specific substance. There are a very limited amount of wildcards available and all have "system" in the CAS# field. Examples are "Miscellaneous". It is not allowed to use a Joker or Wildcard in place of a substance that is declarable or prohibited.

3.2.2 Legislative Flags

A basic substance may be "flagged" with indicators from the Global Automotive Declarable Substance List (GADSL), REACH Substances of Very High Concern (REACH-SVHC) or other legislative indicators.

There are two GADSL flags: "duty-to-declare" (D) and "prohibited" (P). By default, the Ingredients tab of an MDS highlights all GADSL substances with either of these flags in the displayed tree structure

Both, the GADSL category and the flag for REACH-SVHC are displayed in IMDS. In the ingredients screen, REACH-SVHC substance names will always be underlined in the product structure tree, regardless of which filter is selected.

Declarable and prohibited substances in a tree structure are distinguished in the Ingredients page with the following colour differences:

- Declarable substances (D) appear in blue in the product structure tree,
- Substances which are prohibited (P) or both declarable and prohibited (D/P) appear in red.

While creating a Material MDS a substance can be added and flagged as confidential as long it is not part of GADSL or REACH-SVHC (substances of concern). However, if a substance being marked as confidential in a Material MDS is added to one of these lists at a later point of time, this MDS must not be sent or referenced anymore, because substances of concern must be disclosed. The IMDS check procedure returns an Error message for all MDSs containing confidential substances of concern.

Users will be informed by e-mail in case IMDS substances were flagged as REACH-SVHC (... and GADSL) and used before as confidential in a Material MDS. This implies that the user has registered accordingly for this e-mail notification in the IMDS User Settings screen (see 8.1 Personal Settings).

3.2.3 Status

A basic substance will have one of the following statuses:

- active
- inactive (deleted)
- hidden

An inactive substance in an MDS leads to a warning message in the check procedure. In a copy of a material the inactive substances are removed. Most often, a substance is set inactive when it is judged inappropriate for continued IMDS use.

To reduce substance deactivation resubmissions, substances are often “hidden”. A hidden substance will not appear in a search for basic substances (except when a duplicate substance was removed). However, when copying a material containing a hidden substance, no warning message will be generated, nor will the substance be removed from the tree structure. Hidden substances are typically questionable and may, at some future date, become inactive.

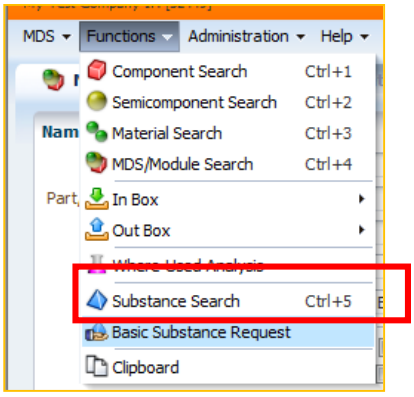
In other words, a hidden substance is a cue to start looking for a new substance to replace the hidden substance. A deleted substance is a cue to replace the deleted substance now. When recommended replacement substances are available for inactive or hidden substances, a hint will appear in the substance details. The user may use the replace function to substitute the suggested substance for the old one. Existing substance groups provide filters for use when searching for basic substances.

With the Functions >> Basic Substance changes >> Search Basic Substance changes option, a user can search for hidden, inactive or active basic substances and view the change history. In the change history screen, the user may select a time period for which to review executed changes. The result list will contain change information, categorized as in the following:

- Details (name, synonym, CAS No., etc.)
- GADSL / REACH SVHC
- status (active, hidden, deleted)

The user may obtain a detailed description of the change history by clicking any of the listed substances. However, history remarks are available only for the period since this function was introduced, i.e. Release 2.2 (December 2004).

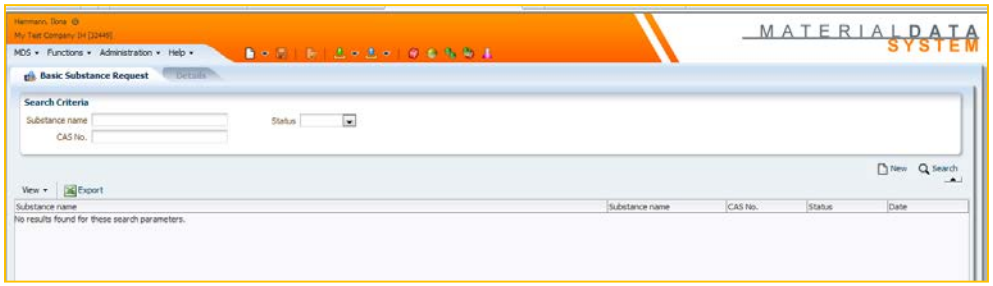
3.2.4 Requesting the addition of a basic substance



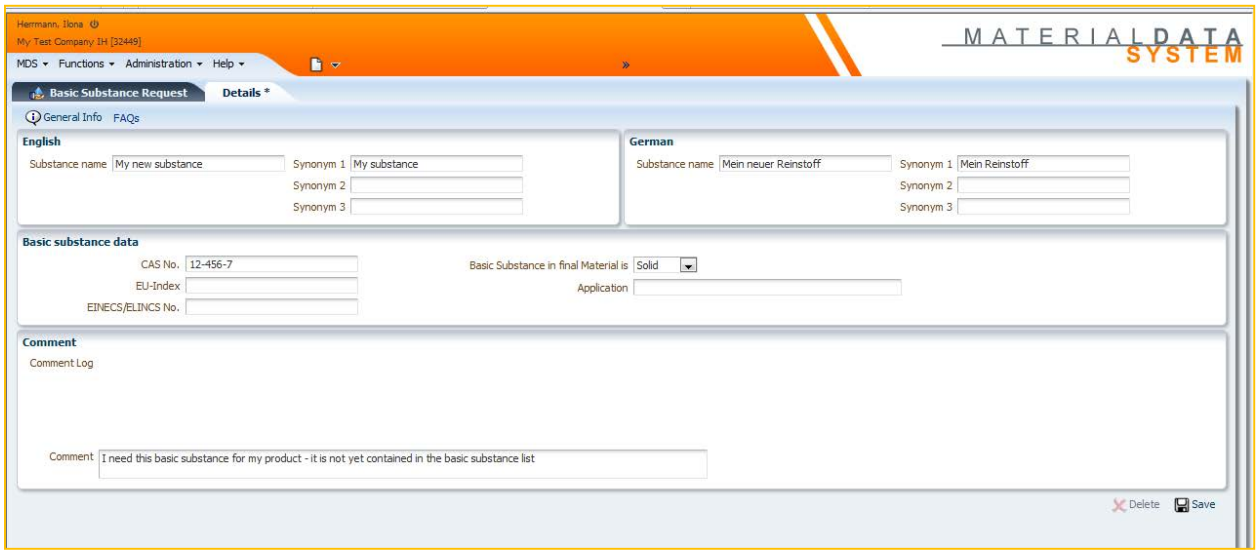
Users may search the basic substances available in IMDS. If a specific basic substance is not found, a user may submit a request to add the substance. Basic substance requests are accessed from the **Basic Substance Request** option on the **Functions** menu.

Several actions are available from the resulting Basic Substance Request screen. Selecting the **Search** button displays all requests the user has created which meet the

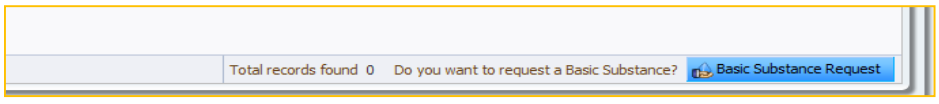
specified filters. The result list shows the name and CAS No. of each substance, the date the request was submitted and the state of the request (new, sent, enquiry, modified, closed). Existing requests may be modified and all past requests can be viewed. If a Basic Substance Search is unsuccessful, a button to start the Basic Substance Request Workflow is provided.



The user must populate the appropriate fields in the request form. Once completed and saved the request generates a notification email to the IMDS Chemical Service. The requester and the IMDS Chemical Service may view the request in the form as shown below.



Should the Chemical Service need further information, the user will receive an e-mail request. When processing is complete after a few working days (successful or not), the request is closed by the Chemical Service. When this occurs, the user receives a request closed notification e-mail. Closed requests cannot be edited.



3.3 Materials and Component MDSs

3.3.1 MDS Types

The following table describes and helps differentiate Components, Semi-Components and Materials:

MDS Type	Description	Can be attached to	Can have child nodes	Has weight field
Material	Represents a homogeneous structure – if a slice were taken through the item, there would be no layers or visible differentiation (exception for electronic components).	Materials, Semi-Components, Components	Material, Substance	No
Semi-Component	Similar to a material, this represents a structure that will require further processing before it is assembled and given a final weight. Examples are a steel blank or a coated wire. Usage is by length, by volume, or by area.	Semi-Components, Components	Semi-Component, Material	No
Component	Used to represent an assembly or component with a defined weight and used in whole number quantities. Examples include a bolt, an engine block, a seat, etc. The weight of a Component MDS is defined at creation and cannot be reduced in the structure.	Components	Component, Semi-Component, Material	Yes

To make MDS management easier, IMDS uses the unique symbols displayed in the table for material, semi-component and component icons. These icons appear in tree structures and in search results. These icons are modified to represent the source of the specific item:

The house symbolizes owned MDSs created within the user's company (component, semi-component, material).

The globe symbolizes published MDSs available to all IMDS Users (component, semi-component, material).

The envelope symbolizes received MDSs from a supplier company (component, semi-component, material).

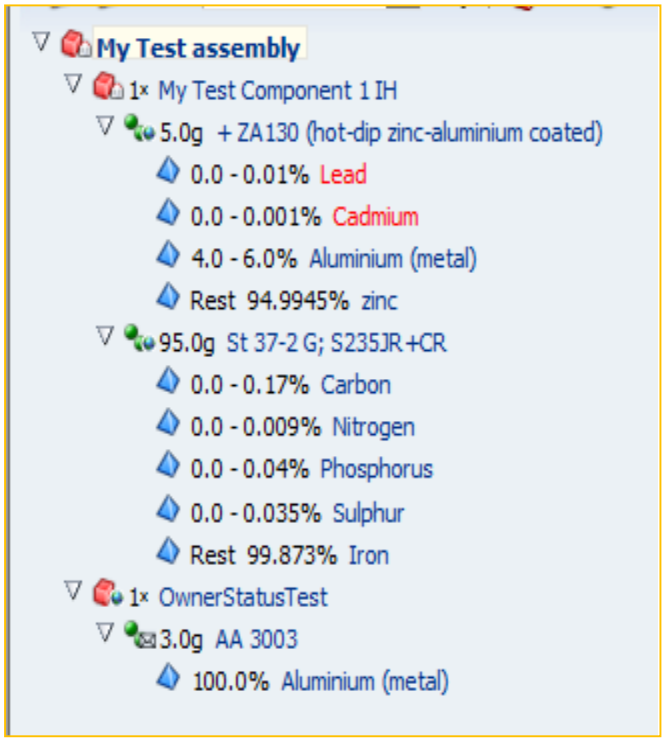
As noted previously, every material in IMDS is ultimately comprised of Basic Substances, represented with the icon .

The Ingredients page of an MDS displays a tree structure which includes parent-child relationships. “Layers” are represented by indentations. Many sub-elements may visually separate items at the same layer. Although IMDS will permit different element types at the same layer, recommendations specify having only one element type per layer. The MDS types have a hierarchy which allows only certain children under a specific parent node:

- **Components may have components, semi-components, and materials as children.**
- **Semi-Components may have other semi-components and materials as children.**
- **Materials may have other materials or basic substances as children.**
- **Basic substances may not have children.**

The following figure displays a representative component tree structure.

In this figure, owned component

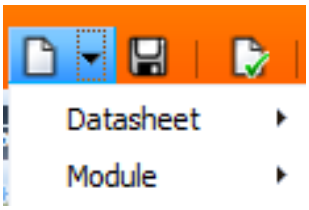


“My Test Assembly” is the parent of owned component “My Test Component 1 IH” **and** published component “Owner Status Test”. “My Test Component 1 IH” and “Owner Status Test” are therefore child nodes of “My Test Assembly”.

Continuing, “My Test Component 1 IH” is the parent node of published material “+ZA130 (hot-dip zinc-aluminium coated)” **and** published material “St 37-2 G”.

Note that each “layer” consists of all the same “type”, with layer one and two components, layer three materials, and layer four (the bottom layer) basic substances. Basic substances cannot ever have children, even other basic substances.

3.3.2 Creating a Material Data Sheet (MDS)



A user may create a new MDS via the Toolbar icons. Alternatively, a user may create an MDS by selecting the menu option MDS and choosing **New**. Using the second method, the user may choose between two sub-menus:

- Datasheet
- Module

In most cases, a user will wish to create a datasheet.

A module can be thought of as a limited, partial MDS. Modules can only be used within your own company, and cannot be sent, proposed, published, or assigned to an Organization Unit. Modules can be added to an MDS, and are useful for a set of components or materials frequently used in full MDSs. For example, if you produce a wide range of products which are mounted using a common set of bolts into a common enclosure, the bolts and enclosure could constitute a module which you incorporate into the various MDSs which utilize these parts. This same "subset" functionality can also be achieved using an MDS, but modules are quicker and easier to create and maintain because they do not have customer or supplier information. A never-released module in edit mode can be converted to an MDS, but this capability is lost once the module is internally released or if other versions exist. More information on modules is provided later in this document (see 3.3.1).

Once Datasheet or Module is selected, the menu opens a submenu from which to choose the type of MDS or module. From this submenu, the user may choose to create a component, a semi-component or a material. Once chosen, the type cannot be changed. The two most commonly created MDS types are Material and Component. Let us start with **Material**.

3.3.3 IMDS Committee Materials

IMDS materials are unofficially divided into two basic categories: Standard and Custom. Standard materials are typically available "off the shelf" in specific formulations, sizes and shapes from a variety of sources according to specific industry standards. Some of these standard materials do not follow the "normal" material rules and should in fact be components. For example, a zinc-coated steel is not homogeneous, and should technically be a component. However, if this zinc-coated steel is specified under one or more industry standards which adequately specify the material composition, there is a good chance it is available as an IMDS standard material. These materials are known as "IMDS Committee Materials".

IMDS contains thousands of IMDS Committee materials, especially for common metals. If an IMDS Committee material does not exist for a standard material you order, a new IMDS Committee material may be requested from an IMDS Service Center by submitting a written support request detailing the material, the standard, and the composition. IMDS Committee materials are always preferable to manually creating a new, custom material if a Norm or Standard was used to procure the material. Some customers even require the use of IMDS Committee materials for standard materials. If your company does not produce a material, your company should not create an MDS for the material.

IMDS Committee materials should never be used for materials with custom, non-industry-standard composition. For custom materials, the supplier creating the new material must provide an MDS. If the supplier does not have an MDS for the material, a new material MDS must be created.

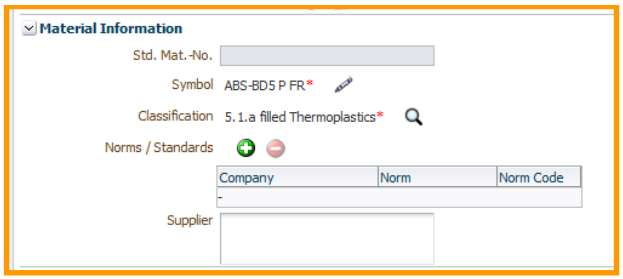
IMDS Committee materials only (ILI, Steel and Iron, SC Committee) can be 'hidden'. This was introduced in order to avoid warning / error messages, where such a Steering Committee-MMDS was used as reference. IMDS does not allow to search for users directly in the MMDS Search because applies only to SC MMDSs. However, users can do an Analysis (see 6 Where-used analysis) on hidden materials to identify these in their MDSs.

3.3.4 Creating a Material MDS

A material is the most basic type of MDS a user can create directly. As IMDS is a material reporting system, the purpose of creating a material is to inform the customer what substances are present in the material.

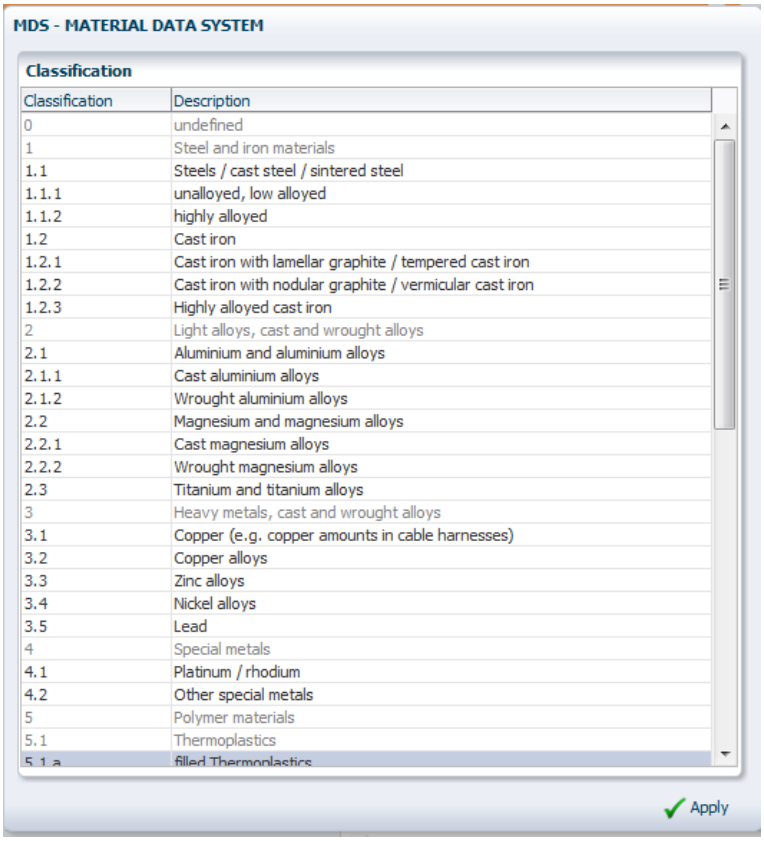
Note that an MSDS (Material Safety Data Sheet) is not usually suitable to create an MDS because an MDS requires entry of 100% of the substances in the final material, and an MSDS rarely provides this information.

The material classification is mandatory for material type datasheets. The information is stored in this area.



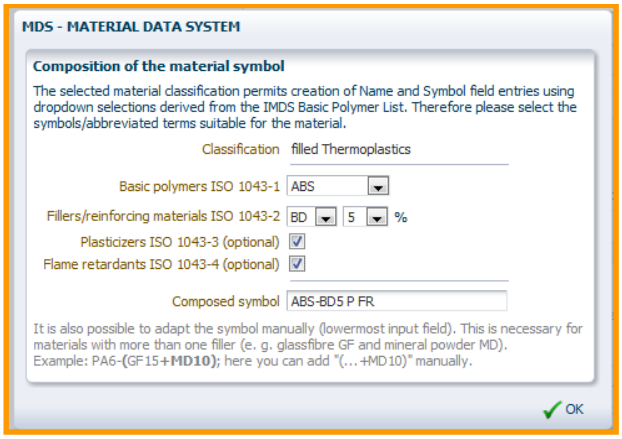
For Material datasheets, a classification must be chosen.

The IMDS classifications are the VDA material classifications similar to the following:


MDS - MATERIAL DATA SYSTEM
Classification
Classification
Description
0 undefined
1 Steel and iron materials
1.1 Steels / cast steel / sintered steel
1.1.1 unalloyed, low alloyed
1.1.2 highly alloyed
1.2 Cast iron
1.2.1 Cast iron with lamellar graphite / tempered cast iron
1.2.2 Cast iron with nodular graphite / vermicular cast iron
1.2.3 Highly alloyed cast iron
2 Light alloys, cast and wrought alloys
2.1 Aluminium and aluminium alloys
2.1.1 Cast aluminium alloys
2.1.2 Wrought aluminium alloys
2.2 Magnesium and magnesium alloys
2.2.1 Cast magnesium alloys
2.2.2 Wrought magnesium alloys
2.3 Titanium and titanium alloys
3 Heavy metals, cast and wrought alloys
3.1 Copper (e.g. copper amounts in cable harnesses)
3.2 Copper alloys
3.3 Zinc alloys
3.4 Nickel alloys
3.5 Lead
4 Special metals
4.1 Platinum / rhodium
4.2 Other special metals
5 Polymer materials
5.1 Thermoplastics
5.1.a filled Thermoplastics
Apply

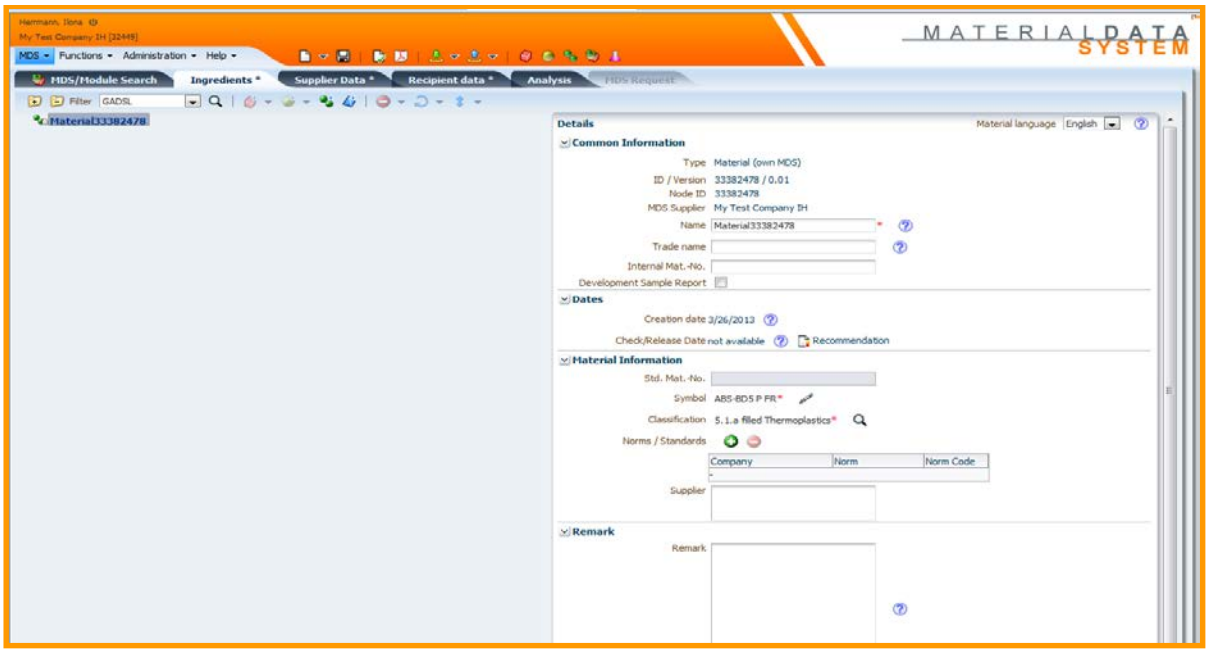
The desired classification is chosen from this screen. Then click Apply.

For some classifications, a material "symbol" is required. The symbol is the ISO standard abbreviation which helps identify the material. In some cases, the classification selection will result in a "symbol definition" wizard screen, which will prompt the user for additional information necessary to create the correct symbol:


MDS - MATERIAL DATA SYSTEM
Composition of the material symbol
The selected material classification permits creation of Name and Symbol field entries using dropdown selections derived from the IMDS Basic Polymer List. Therefore please select the symbols/abbreviated terms suitable for the material.
Classification filled Thermoplastics
Basic polymers ISO 1043-1 ABS
Fillers/reinforcing materials ISO 1043-2 BD 5 %
Plasticizers ISO 1043-3 (optional)
Flame retardants ISO 1043-4 (optional)
Composed symbol ABS-BD5 P FR
It is also possible to adapt the symbol manually (lowermost input field). This is necessary for materials with more than one filler (e. g. glassfibre GF and mineral powder MD).
Example: PA6-(GF15+MD10); here you can add "(...+MD10)" manually.
OK

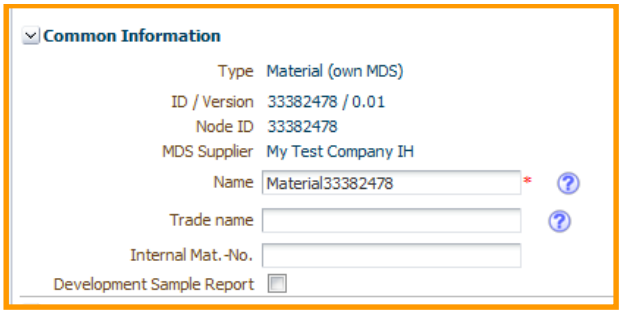
After the classification was chosen, a screen similar to the following is displayed. In this example, all the areas on the right are expanded to simplify this explanation. All mandatory fields are marked with *. Material names are bi-lingual (English and German). Carrying out a search in one of the two different languages may produce different search results depending on the language. As a general rule - if it has the same ID/Version, it is the same location in the database.

Figure 12 – Create a Material



Common Information

Let's take a closer look at the **Common Information:**

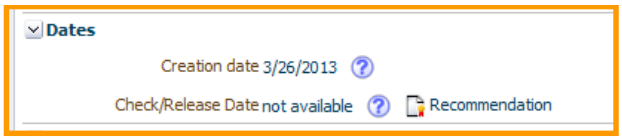


The following table gives a description of each of the fields in this area:

Field Name	Description	Required?
Type	System Generated – Type of MDS (Material, Semi-Component, and Component). You cannot change from one type of MDS to another because different types of MDSs have different information requirements.	Not Applicable
ID / Version	System Generated – The first set of numbers represents the ID of the MDS. As each new version is created, this first portion (ID) will not change, but the version in the second portion (/0.01) does change. When the MDS is "released" (more about that later), the version will become a whole number to indicate further editing is not allowed (for this release).	Not Applicable
Node ID	System Generated – This refers to the actual location in the database where information about this MDS is stored. For the 0.01 version of the MDS, it will be the same as the ID.	Not Applicable
MDS Supplier	System Generated – the IMDS company name of the creating company.	Not Applicable
Name	How your company refers to this MDS in their own terms. You must change from the default name. Each Industry may have naming requirements and conventions.	Yes
Internal Material No.	How your company refers to this Material in numeric terms.	Optional
Development Sample report	Is the MDS representing the preliminary information for a development sample?	Optional

Dates

Sometimes it is very important to know when the MDS was created and the dates of the last change. The next section contains system generated information:



The following table explains what these fields mean:

Field Name	Description
Creation Date	Date MDS was created based on server time (server is hosted in Germany)
Release Date	Date MDS was released (no more changes can be made)
Check Date	Date MDS was checked by the system– useful in tracking under what requirements it was checked

Standard Material No., Symbol and Classification

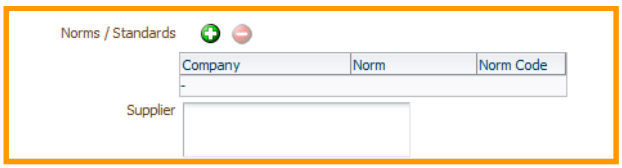
There are two "material numbers" for a material datasheet. The first, the "Internal Material Number" is available for all material classifications. This number is for the supplier's internal use, and may contain any content desired to identify the material. This field is optional, and is never shared with customers.

The second field, the "Standard Material Number" is available only for materials that fall into metal classifications. In this case, the Standard Material Number should reflect the material standard the metal is produced to – usually an EN, UNS or VDA number.

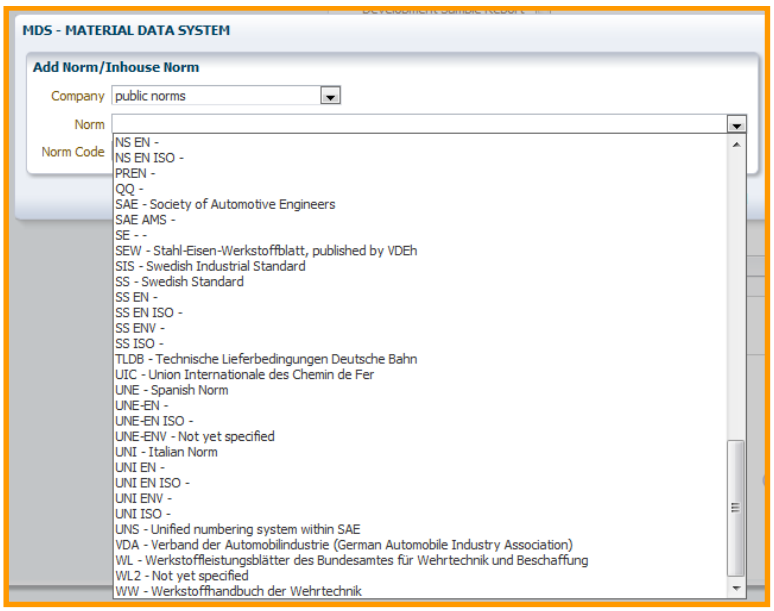
Field Name	Description	Required?
Standard Material No.	Primarily for metals – this is usually a UNS or other numbering system material identifier that uniquely identifies the substance content of the material. Many Norms and Standards refer to properties of the metal in addition to the material content.	Classification dependent
Symbol	For polymeric materials, this is the ISO symbol for the material.	Classification dependent

Norms / Standards

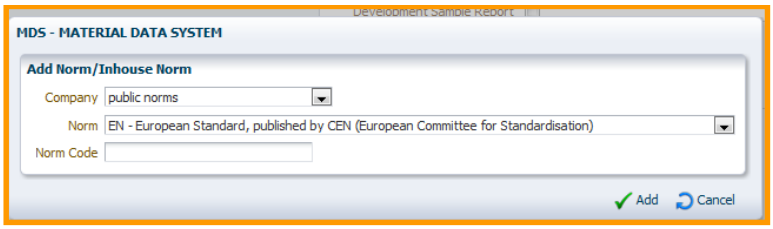
IMDS contains a substantial quantity of "standard" materials, especially for metals. These are typically materials available from a variety of sources according to specific industry standards. If the material is a metal and produced to a Norm or Standard, it is preferable that users leverage one of the IMDS Committee published materials. If your company does not produce the material, then your company should not create the MDS for the material. The producer of a material should always create the MDS, or if it is to a publishable standard, IMDS Committee material datasheets should be used.



If a Norm or Standard can be added creating a material MDS, the ⊕ will display a window similar to the following:


MDS - MATERIAL DATA SYSTEM
Add Norm/Inhouse Norm
Company
public norms
Norm
Norm Code
NS EN -
NS EN ISO -
PREN -
QQ -
SAE - Society of Automotive Engineers
SAE AMS -
SE - -
SEW - Stahl-Eisen-Werkstoffblatt, published by VDEh
SIS - Swedish Industrial Standard
SS - Swedish Standard
SS EN -
SS EN ISO -
SS ENV -
SS ISO -
TLDB - Technische Lieferbedingungen Deutsche Bahn
UIC - Union Internationale des Chemin de Fer
UNE - Spanish Norm
UNE-EN -
UNE-EN ISO -
UNE-ENV - Not yet specified
UNI - Italian Norm
UNI EN -
UNI EN ISO -
UNI ENV -
UNI ISO -
UNS - Unified numbering system within SAE
VDA - Verband der Automobilindustrie (German Automobile Industry Association)
WL - Werkstoffleistungsblätter des Bundesamtes für Wehrtechnik und Beschaffung
WL2 - Not yet specified
WW - Werkstoffhandbuch der Wehrtechnik

After you select your norm, you return to the window where you can enter the specific code (mandatory):



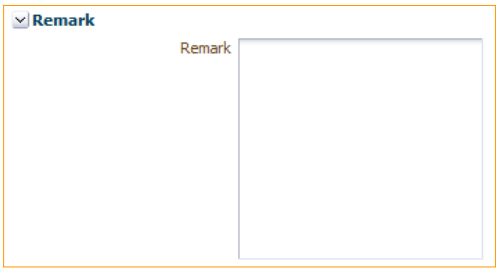
A Material MDS may contain public norms or OEM company norms. Company norms are visible only for the company the norm belongs to and are not visible along the supply chain. Under Recipient Data the originally selected norms for the Material MDS are listed. The Tier1 supplier may overwrite the norms as recipient-specific data. These entries exist in parallel to the original values which are part of the (referenced) Material MDS. For each Material MDS occurrence (based on IMDS-ID/Version) one entry exists. IF more than one (company-) norm for such an MDS exists, these are comma-separated and listed as the 'Norm/Norm Code'. For those Material MDSs without norms assigned, norms can be added by the Tier1 supplier.

Norms can be modified or added via a pop-up. A reset function will allow resetting to the original values from the Material MDS reference in the tree. An 'Apply to all recipient OEMs' function allows the changes to be added to the company-specific data of all OEMs in the recipient list of that MDS.

A company specific WARNING-check for Toyota in-house norms exists: The check procedure verifies if a norm has been added in the recipient-specific area by the Tier1 supplier.

Remark

This is a free text area where you may want to include some information about the material. This field is optional.

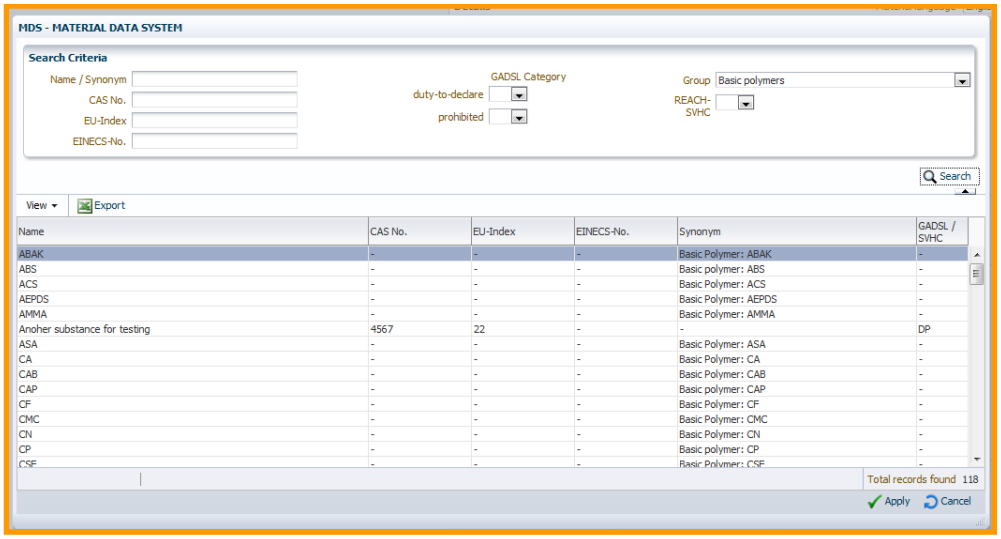


Add the Ingredients

Once the basic information is given, the ingredients need to be added. Focusing in on the available MDS types (see section 3.3.1), the only choices for a material are other materials and substances as the others are greyed out (disabled). Adding a material is only possible using referencing. This means the MDS will be linked to another MDS or substance which is attached by performing a Search.

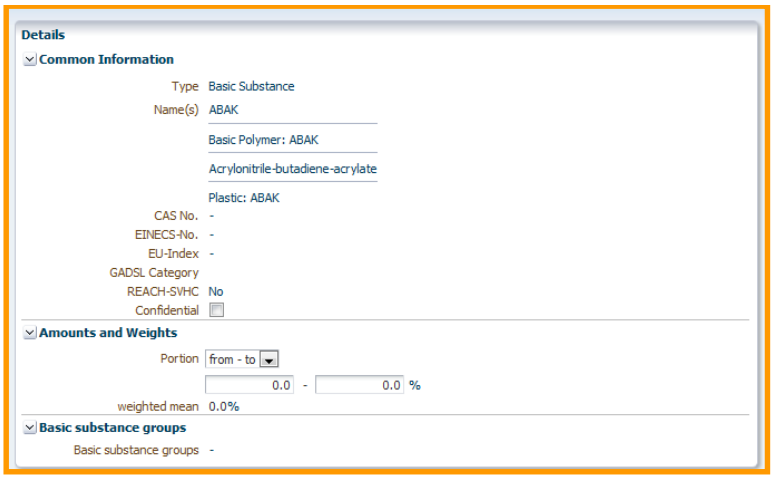
Attaching Substances

In this case, we're going to add a Basic Substance . We have searched in the Basic Polymer Group:



When the substance is found, it needs to be highlighted and clicked on Apply.

The left side of the screen is now highlighting the added basic substance and the right site presents something similar to the following (expanded):



The following table describes the information presented:

Field Name	Description	Required?
Type	Type of Node: Basic Substance, Material, Semi-Component, Component	NA
Name(s)	Presents the synonyms for this substance – this is a view of the Basic Substance List.	NA
CAS No.	Chemical Abstract Number for the Substance – this is a view of the Basic Substance List.	NA
Einecs-No.	Einecs Number for the Substance – this is a view of the Basic Substance List.	NA
EU-Index	EU-Index number for the Substance – this is a view of the Basic Substance List.	NA
Confidential	Checking this box will limit visibility to the substance to those with IDs in your company and to those given Trust User Status into your company.	Optional
Portion / %	Indicates whether the content specifies a "Fixed" amount, a "Range" (from – to) or the system is calculating the remaining % (Rest). It is highly recommended not to use "Rest" on a joker/wildcard.	Yes
Basic Substance Lists	Indicates in which groups the Basic Substance is a member. This is a view of the Basic Substance list.	NA
Process Chemical	If this substance is a Process Chemical, indicate awareness and whether in this instance it is a Reaction Residue or Impurity.	Dependent on the substance

3.3.5 Creating a module

The creation of a module is similar to the creation of an MDS. However, a module cannot be sent, proposed, or published. Additionally, since a module does not have Supplier data assigned, it cannot be assigned to an Organization Unit.

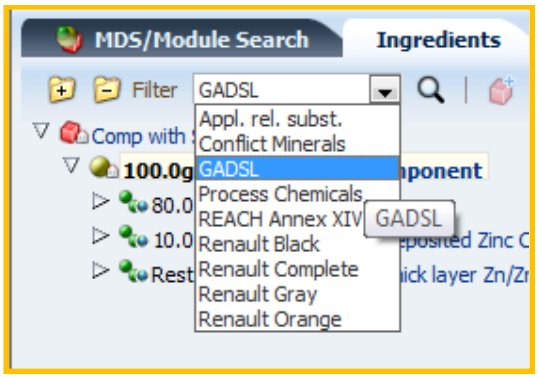
Most users use modules for items that are frequently used in their other assemblies although MDSs can also be used for this purpose. Modules are quicker to create because they do not have Supplier or Recipient information and can be internally released from the Ingredients view.

For components which only vary slightly from one another, recreating the component each time in different MDSs is unnecessarily time-consuming. A company can design its own “construction kit” within the system using modules. For instance, when an electronic circuit board with exactly the same components is used, the producing company can construct a module for the circuit board. If the company wants to use this circuit board in a Material Datasheet, the module can be attached through a link. The module is not copied onto the tree and cannot be changed within the MDS.

As long as the module is in initial edit mode (version *.01) it can be converted into an MDS by clicking the button “→ MDS” after performing a module search. However, the module cannot be converted to an MDS if it is internally released or if more versions exist.

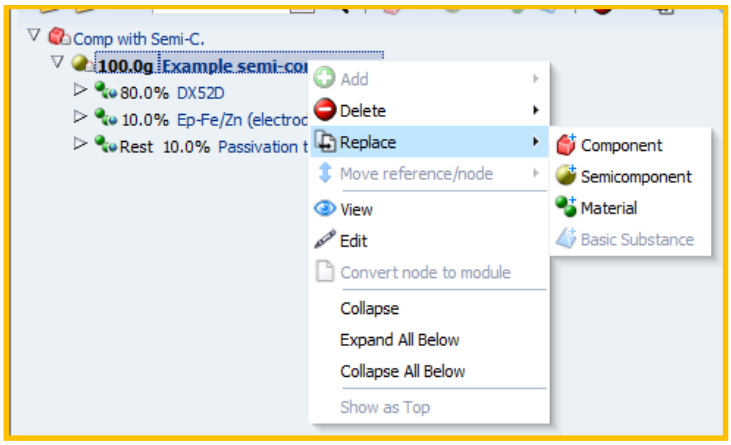
3.3.6 Filter Function

With the filter function in the ”Ingredients“ screen the various basic substances filters can be chosen for display. The ingredients contained in the respective list will be displayed in red in the structure tree (with the exception of the GADSL list where prohibited substances are listed in red and the declarable substances in blue). The default list is the GADSL list. This is a view only function and the view cannot be “saved” for sharing with a recipient, another user in the company, or the next time you log in (if changed from the default). REACH-SVHC are always underlined regardless of the filter chosen.



3.3.7 Replace Function

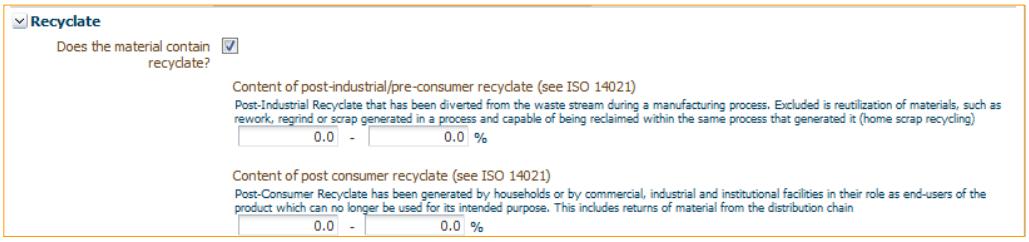
This functionality allows the IMDS user to select certain referenced nodes in MDS trees in edit mode and replace these by other suitable nodes. This concerns referenced MDS, modules and substances.



The system is guiding the user to replacements for inactive or hidden substances after copying a material which contains this kind of substances. When replacement substances are available for inactive or hidden substances, a hint will appear in the substance details. The user can then use the replace function to use the suggested substance instead of the old one.

3.3.8 Recyclate Information

Most of the fields on the right have been covered in a previous section. There is a new field, **Recyclate**. If you check the box: **Does the material contain recyclate?** the box changes and is editable:


Recyclate
Does the material contain recyclate?
Content of post-industrial/pre-consumer recyclate (see ISO 14021)
Post-Industrial Recyclate that has been diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials, such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it (home scrap recycling)
0.0 - 0.0 %
Content of post consumer recyclate (see ISO 14021)
Post-Consumer Recyclate has been generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain
0.0 - 0.0 %

Another name for Recyclate is Recycled Content. In some areas of the world, there are requirements that a certain portion of the material be from recycled content.

Post Industrial recyclate is recycled content from industry. Post-consumer recyclate is recycled content from consumer waste. The definitions used for post-industrial and post-consumer recyclate are from the ISO 14021 definitions that are commonly used in many industries. If you have recycled content, we highly recommend entering it here.

Recyclate information may be entered for Material MDSs of classification 1, 2, 3, 4, 5, 7.1 and 7.2 being referenced in a semi-component or component. If the MDS recipient is an OEM a "Modify Recyclate Information" section is available under Recipient Data. The values in this section are pre-populated with the values of the Material MDS in the context of its parent MDS (component or semi-component) in the tree. The Tier1 supplier may overwrite the recyclate values as recipient-specific data via pop-up menu. A reset will allow resetting to the original values from the Material MDS reference in the tree. An 'Apply to all recipient OEMs' is available in this screen so changes may be added to the company-specific data of all OEMs in the recipient list of this MDS. These values exist in parallel to the original values in the (referenced) Material MDS. One entry is permitted for each recyclate-relevant Material MDS occurrence in the MDS. This option is available even when the Material MDS provider indicates no recyclate is used.

There exist three ERROR-checks on recyclate. The check procedure verifies if the recyclate entries being made in the recipient-specific area by the Tier1 supplier comply with the existing rules. For a reference in the MDS with an ERROR, the entry in the recipient-specific screen can be overwritten and corrected.

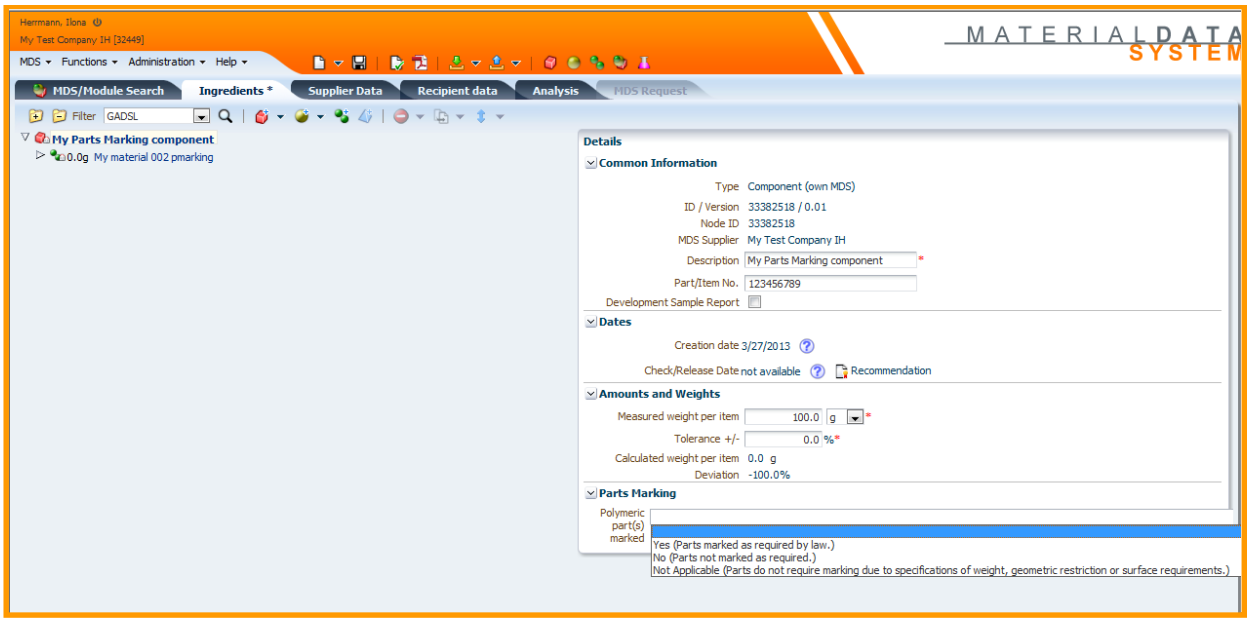
3.3.9 Polymeric Parts Marking

To improve the quality and benefits of IMDS data, polymeric parts are marked according to ISO 1043-1/2, ISO 11469 or ISO 18064.

If an MDS is created or modified, the Parts Marking information will need to be supplied if the MDS meets all of the following criteria:

- The parent node is a component
- At least one child node of the component parent node is a material with one of the 5.* classifications

Depending on the weight of the component, the Parts Marking question may be optional or mandatory. If the component does not meet the above criteria, the Parts Marking question will not be available. When a new or edited unreleased MDS or module fits the Parts Marking criteria, an additional question appears in the details of the material's parent component. If the answer is mandatory, the question must be answered before the user may release the MDS/module internally or send/propose it to a recipient. If the entry is mandatory and the answer is "No" the user will receive a warning message.



To correctly answer the question, someone needs to review the design drawing and the physical part. The tree must be evaluated to select the appropriate response. Any of the options may be applicable. When a component is added to a component tree by a reference to a material of and appropriate classification, the parent of the attached component is a parts- marking candidate. This is the result of the parent relationship with the material. In this case, the parts marking information must be entered for the top component.

Yes should be selected if the actual physical part has been marked. No should be chosen if there is a parts marking requirement on the design drawing, but the part is not marked. Not Applicable can be selected if weight, dimensioning, or surface does not permit marking.

When a referenced node contains a material of the relevant classification, but is not a component (for example a semi-component), parts marking information must be entered for the parent component.

The IMDS check window will contain a **warning**, which still allows the MDS/Module to be released, if the parts marking candidate fulfils the following condition:

- The part contains materials with the classifications 5.1, 5.1 a, 5.1 b, 5.3 and 5.4.1 that sum to a weight of more than 25g

The IMDS check window will indicate an **error**, which will prevent the MDS/module from being released, if the parts marking candidate fulfils one of the following conditions:

- The part contains materials with the **classifications 5.1, 5.1.a and 5.1.b** that sum to a weight of **more than 100g**
- The part contains materials with the **classifications 5.3** that sum to a weight of **more than 200g**

If a component is a Parts Marking candidate (a component with a 5.* material classification) and the IMDS check window does not indicate an error, the parts marking information is optional.

All MDSs/modules released prior to IMDS Release 3.0 do not and will not have parts marking information. The IMDS check window will indicate a warning if the MDS/module to be released references a released MDS where the Parts Marking information is mandatory but is not answered (referenced datasheet was created prior to Release 3.0). The referencing MDS/module can be released. A future IMDS release may replace this warning with an error which will prevent the MDS/module from being released, yet a a date for this conversion has not been determined.

When a parts marking candidate is copied (or if a new version is created), its parts marking information will also be copied.

For components referencing a Material MDS of classification 5.x Parts Marking information is required. If the recipient of the MDS is an OEM, the Recipient Data tab contains a “Modify Parts Marking” section. The values in this section are pre-populated with the values of the Component MDS inside the tree. The Tier1 supplier may overwrite the Parts Marking values as recipient-specific data. This data exists in parallel to the original values being part of the (referenced) Component MDS. One entry is permitted for each relevant Component MDS occurrence in the MDS.

The parts marking settings can be changed with a pop-up menu. A reset function allows resetting to the original values from the MMDS reference in the tree. An 'Apply to all recipient OEMs' is available to apply the changes to the company-specific data of all OEMs in the recipient list of this MDS.

The check procedure verifies if the parts marking entries being made in the recipient-specific area by the tier1-supplier comply with the rules. For those references which produce a WARNING or ERROR message, the parts marking entries can be overwritten in the recipient specific screen.

3.3.10 IMDS Substance Application Codes

The IMDS system contains many basic substances. Some are marked “duty to declare” or “prohibited”. Basic substances marked as “prohibited” should not be used in the automotive industry except for certain applications (valid for a defined time based on legal requirements). Not all “prohibited” substances have defined applications. Applications are also defined for

some basic substances that are marked “duty-to-declare”. The application information is necessary for the OEMs to comply with ELV Annex II and other environmental regulations. Since release 3.0, when using a restricted substance, you must also declare how you are using it by supplying an Application Code. Application codes are required for lead (and all of its compounds), hexavalent chromium (and all of its compounds), mercury (and all of its compounds) and cadmium (and all of its compounds) as well as for Nickel and Polycyclic Aromatic Hydrocarbons (PAHs). Application codes are only displayed in English, regardless of the language the IMDS user is using.

IMDS data should reflect the actual structure of the product as sold. If the product contains a prohibited substance, this must be reported in the MDS, and the supplier should be re-engineering the product to eliminate the prohibited substance. If an undeclared prohibited substance is found later, there may be added legal and financial ramifications.

Sale of a part with prohibited substances creates liability; not the corresponding valid IMDS entry. The valid IMDS entry helps to manage and mitigate the liability.

The application information is based on the **current Annex II** regulations and requirements. Annex II can be found on IMDS Information pages > FAQ > Where can I find the ELV Directive and the latest version of Annex II? This document is revised yearly and the latest version available will be posted.

Application codes have different requirements based upon the supplier’s position in the automobile supply chain. Since IMDS Release 3.0, any new component containing a material using an application relevant substance must have an application code before releasing. However, a lot of “legacy” components created prior to Release 3.0 exist. These need application codes added. The IMDS check function determines where an IMDS company is in the supply chain. Tier 1 suppliers cannot send an MDS to an OEM without completing all required application codes. Tier 2 to Tier n suppliers receive a warning of missing application codes, yet may still send received MDSs without application codes. The following table summarizes the handling of application codes:

Note: There may be a difference between the IMDS requirements for your company and the requirements for your customer’s company. Your customer may require resubmission due to missing application codes.

Handling after 1st March 2006

	MDS / Modules	Messages	Application Code
within Supply Chain	own	Error	need to create new MDS versions
	foreign	Warning	MDS can be sent, but new versions should be requested
Tier1 sends to OEM	own	Error	need to create new MDS versions
	foreign	Error	can be amended

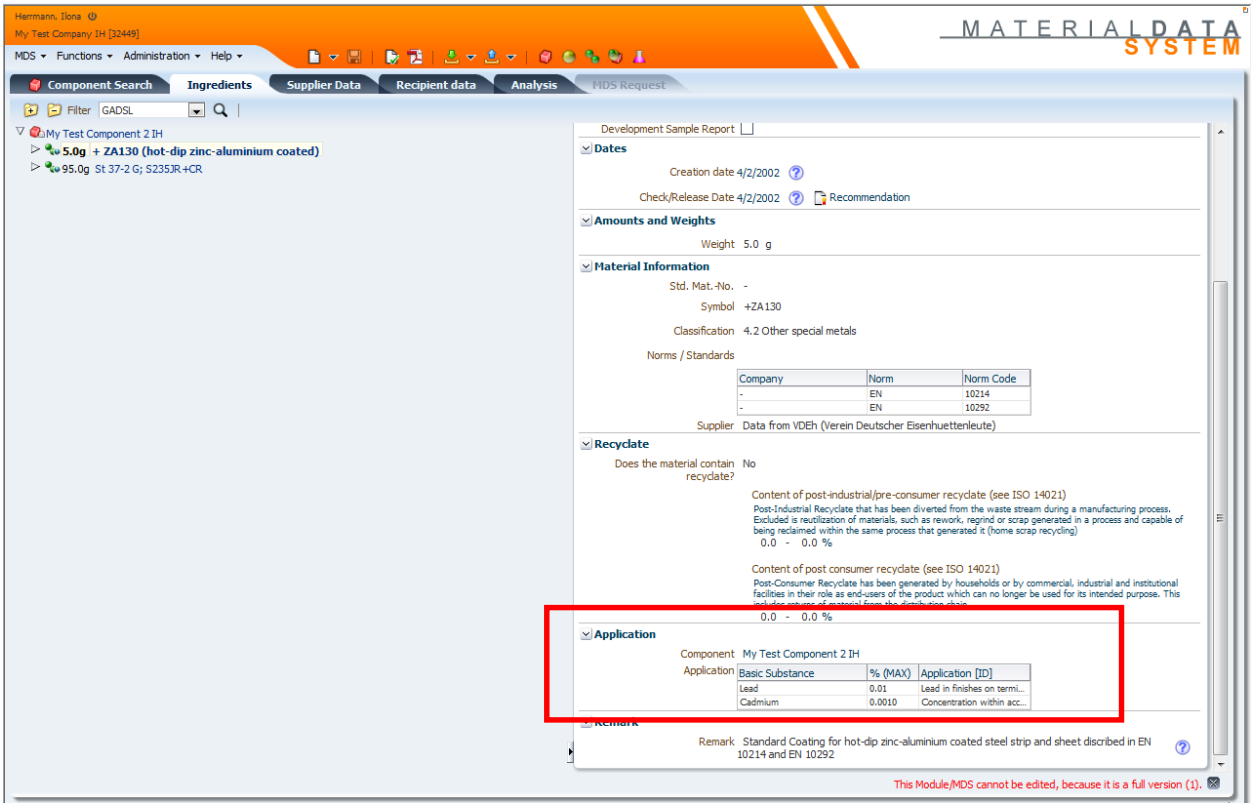
Application codes are assigned when attaching the material to a component MDS. Application codes are set ONLY on components. Please do not contact your material supplier and ask them to add an application code. They cannot. Since application codes are dependent upon how the material is used, the best person to determine how the material is being used is the person adding the material to the component.

If the material requiring an application code is attached to a semi-component, when the semi-component is attached to a component, an application code is required. For materials or semi-components, application codes do not have to be provided. Depending upon the substance and the classification of the material where the substance is used, the system will provide a list of available Application codes. In certain instances when the most likely application code is easily determined, the system will pre-select a suggested Application code. For example, it will select "impurity" as the Application Code where certain thresholds are not exceeded - such as 0.1 % for Hg, Pb, Cr6 and 0.01% for Cd. The options for the application code depend on the substance, the material classification, and the percentage of the substance in the material. The user is still responsible to verify this suggested application code is correct.

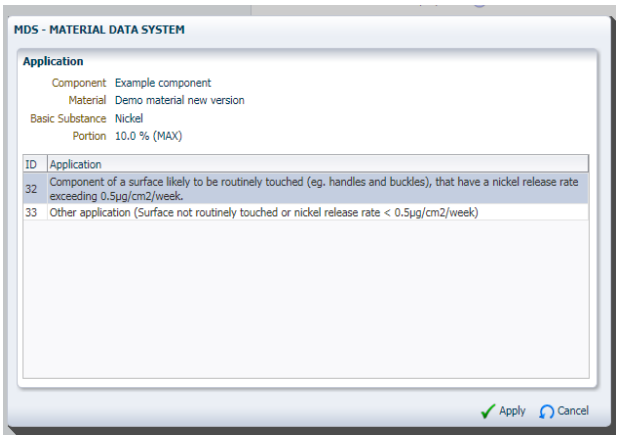
Application codes may be viewed by selecting the material within the component where it is attached. Application codes may be changed as long as the MDS is in edit mode (version number is not a whole number, e.g. .01). This also applies to application codes entered for older material MDS references.

During the check procedure, missing Application Codes may generate either an error or a warning. For all material MDS references that do not have applications assigned (because it is historic data) the user must complete the application codes before sending the MDS to an OEM.

The detailed view of each material will have additional **Application** information. This section contains all substances of the material that require Application Codes. When the user clicks on the application field, all possible Application Codes for that substance on that material will be displayed.


Herrmann, Ilona
My Test Company IH [32449]
MDS Functions Administration Help
MATERIAL DATA SYSTEM
Component Search
Ingredients
Supplier Data
Recipient data
Analysis
MDS Request
Filter GADSL
My Test Component 2 IH
5.0g + ZA130 (hot-dip zinc-aluminium coated)
95.0g St 37-2 G; S235JR+CR
Development Sample Report
Dates
Creation date 4/2/2002
Check/Release Date 4/2/2002
Recommendation
Amounts and Weights
Weight 5.0 g
Material Information
Std. Mat.-No. -
Symbol +ZA130
Classification 4.2 Other special metals
Norms / Standards
Company Norm Norm Code
- EN 10214
- EN 10292
Supplier Data from VDEh (Verein Deutscher Eisenhuettenleute)
Recyclate
Does the material contain recyclate? No
Content of post-industrial/pre-consumer recyclate (see ISO 14021)
Post-Industrial Recyclate that has been diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials, such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it (home scrap recycling)
0.0 - 0.0 %
Content of post consumer recyclate (see ISO 14021)
Post-Consumer Recyclate has been generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This
0.0 - 0.0 %
Application
Component My Test Component 2 IH
Application
Basic Substance % (MAX) Application [ID]
Lead 0.01 Lead in finishes on termi...
Cadmium 0.0010 Concentration within acc...
Remark
Remark Standard Coating for hot-dip zinc-aluminium coated steel strip and sheet discribed in EN 10214 and EN 10292
This Module/MDS cannot be edited, because it is a full version (1).

The application for a specific basic substance can be selected on another window:


MDS - MATERIAL DATA SYSTEM
Application
Component Example component
Material Demo material new version
Basic Substance Nickel
Portion 10.0 % (MAX)
ID Application
32 Component of a surface likely to be routinely touched (eg. handles and buckles), that have a nickel release rate exceeding 0.5µg/cm2/week.
33 Other application (Surface not routinely touched or nickel release rate < 0.5µg/cm2/week)
Apply
Cancel

Note: while application codes may always be viewed, they can only be changed when the component the material is attached to is the top node or a child of a component created in a tree and in edit mode.

When application data is missing or selected applications are invalid, errors or warnings are created by the check procedure depending of the owner of the data.

Prior to Release 3.0, an implementation of "application ID" was implemented for certain OEM recipients. Since Application codes are implemented entirely differently since Release 3.0 than in the previous releases, data created prior to Release 3.0 cannot automatically be transferred to the MDS.

The functionality of hiding applications is possible for any ARS (Application relevant substance), application and their relations. As a consequence, data that was previously entered will be shown, but are marked as legacy data. Hidden application data will not be available for new datasheets. The legacy data is considered valid and can still be used; no error or warning messages are generated.

If the MDS is sent to an OEM, missing Application ID must be filled in by the Tier1 supplier. In this case, the Recipient Data tab displays a “Modify Applications” section. Entries are pre-populated with the application values of the Material MDS with its parent Component MDS inside the tree. The Tier1 supplier may overwrite the application value with other applications available for this MMDS/AppRelBS combination as recipient-specific data. This data exists in parallel to the original values being part of the MMDS. An entry exists for each relevant MMDS/ AppRelBS combination. For each entry, the application selection can be changed using a pop-up. A reset function will allow resetting to the original values from the MMDS reference in the tree (not displayed in the screen). An 'Apply to all recipient OEMs' is available to apply the changes to the company-specific data of all OEMs in the recipient list of this MDS.

The check procedure verifies if the application entries being made in the recipient-specific area by the Tier1 supplier comply with the IMDS checks. In addition, applications inside the MDS tree with a WARNING or ERROR message can get overwritten as recipient-specific data.

3.3.11 Supplier Data

The Supplier Data tab is where contact information for the MDS is entered and the Organization Unit selected if those are used in a company. In IMDS terms, the MDS-creating company is the supplier of the MDS. The Contact drop down list in this screen lists the entries of contact persons for the company. These are created by the company administrator under **Administration > Contact Person** > New.

The Contact Person lists and the User IDs are separate lists. A Contact Person may not have a User ID and a User may not be a Contact Person. If the correct Contact Person does not appear in the pull down, contact your company administrator to have them added.

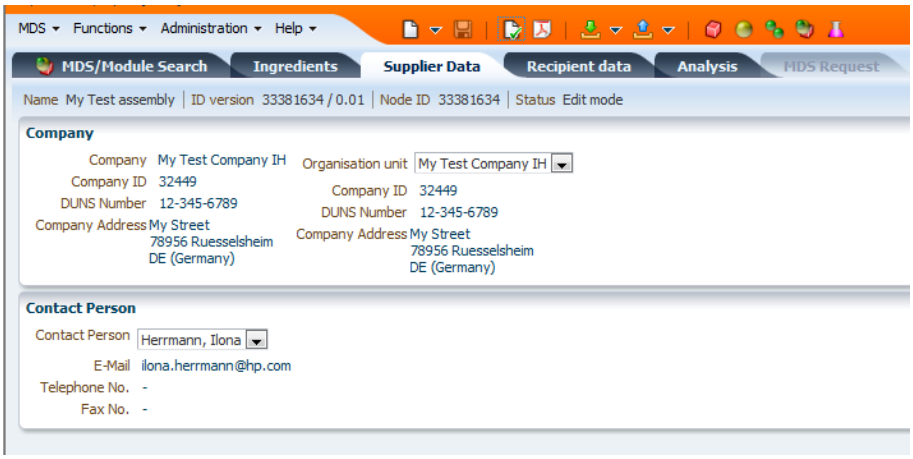
Contact persons are company-wide contacts, i.e. there is no contact person assigned to Organisation Units.

When the Contact person is selected, their information will automatically populate the boxes at the bottom of the frame. If the user determines this information not to be correct (wrong e-mail address, person no longer with the company etc.), the Company Administrator needs to be contacted to update the information. The Company information at the top of the frame will always be that of the parent company, although this MDS may be assigned to any Organizational Unit to which the user has access. The user may only select Organization Units to which the user has access. The Organization Unit default is the parent company. If an expected Organization Unit is not available, the company administrator needs to be contacted to add the Organization Unit to the User ID.

If an MDS is assigned to an Organization Unit, that Org Unit is shown as the sender in the customer's Inbox. Only users within the Organization Unit can see what is sent from the Organization Unit Inbox. Generally, the IMDS search screens for material datasheets show datasheets for all organisation units. From the Outbox menu option, all users will have access MDSs sent from the parent company. Users with access to an Organization Unit will also have access to MDSs sent from that Organization Unit in the Outbox. For example, if one user has access to the parent company and another an Organization Unit, the number of items in the Outbox of the 2nd user will be greater than the number of items in the Outbox of the 1st user – provided the MDS was assigned to an Organization Unit on the Supplier Data page.

This screen provides the customer with information on who to contact outside of IMDS should there be questions about the datasheets.

The Supplier Data Screen looks similar to the following:



This is NOT an editable screen. All of the information is drawn from the information on the User list of the company. If there is missing or incorrect information, the Company Administrator must correct it on the Administration screens. The appropriate contact needs to be selected

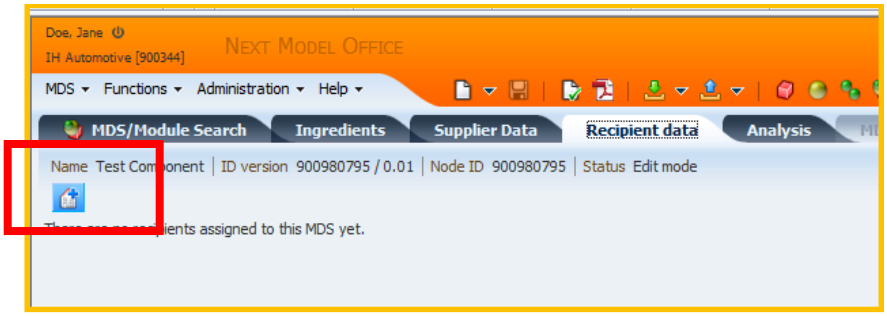
from the drop down list. The IMDS system then goes to the Contact List for the company and displays the E-mail, Telephone, and Fax information stored on the Contact List.

Once the correct contact is displayed on this page, the Recipient Data can be entered.

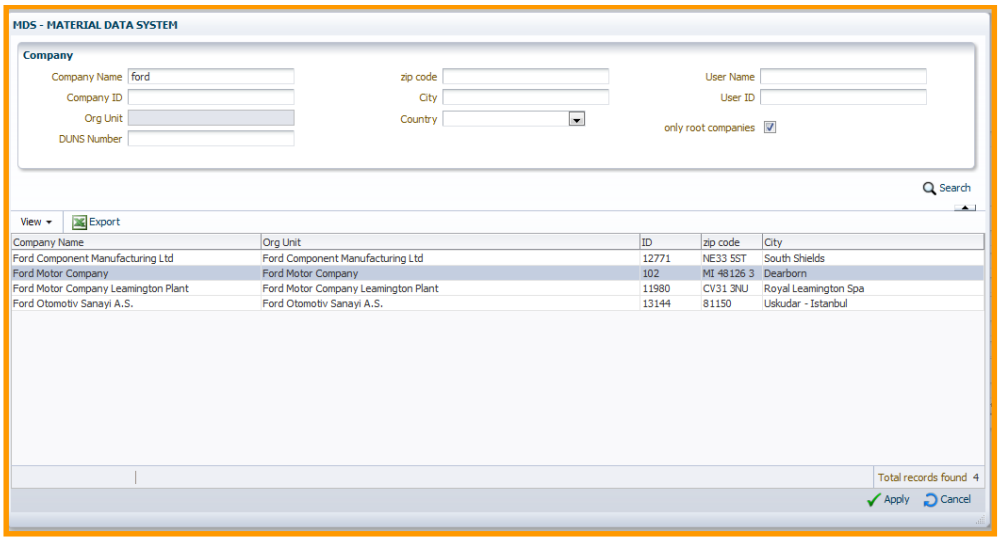
3.3.12 Recipient Data

The recipient (the customer) of the MDS is added in this tab window. **At least one recipient** must be added **to enable the Send and Propose buttons.** Prior to adding a recipient only the options "Internal" and in some cases "Publish" are available. These two processes are described later and are not directly associated with a recipient. It is possible to internally release the MDS within the company without naming any recipient. Some users can also Publish an MDS to all users of IMDS.

The recipient must be selected to "send" the MDS to one particular IMDS user company or to several customers (propose). The process is started by selecting the "Add" button on the upper left.



A window in which to perform a company search will be displayed.


MDS - MATERIAL DATA SYSTEM
Company
Company Name ford
Company ID
Org Unit
DUNS Number
zip code
City
Country
User Name
User ID
only root companies
Search
View
Export
Company Name | Org Unit | ID | zip code | City
Ford Component Manufacturing Ltd | Ford Component Manufacturing Ltd | 12771 | NE33 5ST | South Shields
Ford Motor Company | Ford Motor Company | 102 | MI 48126 3 | Dearborn
Ford Motor Company Leamington Plant | Ford Motor Company Leamington Plant | 11980 | CV31 3NU | Royal Leamington Spa
Ford Otomotiv Sanayi A.S. | Ford Otomotiv Sanayi A.S. | 13144 | 81150 | Uskudar - Istanbul
Total records found 4
Apply
Cancel

"Search Criteria" such as the company name or the first letters of a company name are recommended to limit the size of the results list. For example, a user may enter "Vi" to list all companies which begin with the letters "Vi". Similarly, if a user enters *tubos , only companies with the character string "tubos" are returned. The search is started by clicking the "search" button.

It is best to search by Company ID, Org Unit ID or DUNS number. There are many IMDS companies with similar names, whereas IDs are unique. The person asking your company for the MDS should provide an ID for their company or organization unit.

Search results are displayed in the lower area of the window. Select the desired recipient company or Org Unit and click "Apply" to make the highlighted company an MDS recipient.

Note: A word about Organizational Units:

A user must know where to send an MDS. It may be appropriate to send either to an Organisation Unit or to the "roof" company. It is always good to verify the IMDS recipient ID before sending, as many companies have multiple registrations (for the OEM recipients, please check for special instructions on the IMDS Information Pages under FAQ > OEM-specific). If sending to an Organization Unit, only users in the receiving Organization Unit can accept the MDS, and only users in the receiving Organization Unit will be able to view the MDS in the Inbox.

A single MDS version may be sent within a single "roof" company only once. If the user must send to multiple Organization Units within the same "roof" company, they will need to make multiple copies (Copy/Copy) of the MDS, and send copies to subsequent Org Units.

The IMDS Company to which the sender belongs cannot be a recipient.

Select the recipient and click **Apply** to display the "Recipient data" screen containing the chosen recipient.

Once a recipient is added, the buttons "Send" and "Propose" are no longer disabled (greyed out). If the MDS was not released, the both **Send** and **Propose** are available**.** If the MDS was released, only **Propose** is available. If the list contains more than one recipient, the "Send" command is disabled, because this function is valid for one recipient only. If the MDS is internally released, only **Propose** can be selected.

To add more recipients the process must be repeated. A user may add as many recipients as desired to the recipient data page, provided the **Send** command was not performed. Remember, an IMDS parent or "roof" company can appear only once. If an MDS needs to be sent multiple times, please use Copy/Copy.

To delete one or more of the recipients, use the "Delete" command. The action is carried out for highlighted entries only. A recipient can be deleted only if the MDS has not been accepted by the recipient. Once accepted, the MDS cannot be deleted (see also section 3.3.17)

Immediately after adding a new recipient, another window will appear to enter the company data (recipient company data).

Adding the recipient specific information at this time provides the capability to enter the MDS once and send it to different companies with different part numbers. The part number or material number entered here, along with the description or name, is what the customer sees on the MDS Ingredients page when they receive the MDS. If they reject for number or description, the information may be corrected on the recipient page without creating a new version (provided the MDS has not been accepted). Should copy/new version be chosen for the MDS, all the recipient information including that specified above are copied to the new version.

Customer information must be entered in the correct format. Some recipients have offline systems that perform some error checking. While a human eye will accept minor variations, most computer systems cannot. Slight differences such as an extra dash or a missed space often result in rejection.

DUNS-No. as supplier identification number (sending to GM, Opel, Saab and Volkswagen)

Created in 1962 by Dun & Bradstreet (D&B), the Data Universal Numbering System or DUNS® Number is used to uniquely identify business entities on a location-specific basis. Assigned and maintained solely by D&B, this unique nine-digit identification code has become the standard for keeping track of the world's businesses. IMDS uses the DUNS syntax published by Dun & Bradstreet (D&B) of XX-XXX-XXXX. If your company does not have a DUNS number and you need one, you need to get one from Dun & Bradstreet (www.dnb.com).

If the company administrator has entered a DUNS number on the company or Org Unit profile, the Supplier Code field is pre-populated with this number. If the DUNS number is not available, the field will be left blank. This field is editable for customers using a different numbering system and for companies with multiple sites using the same IMDS Company ID.

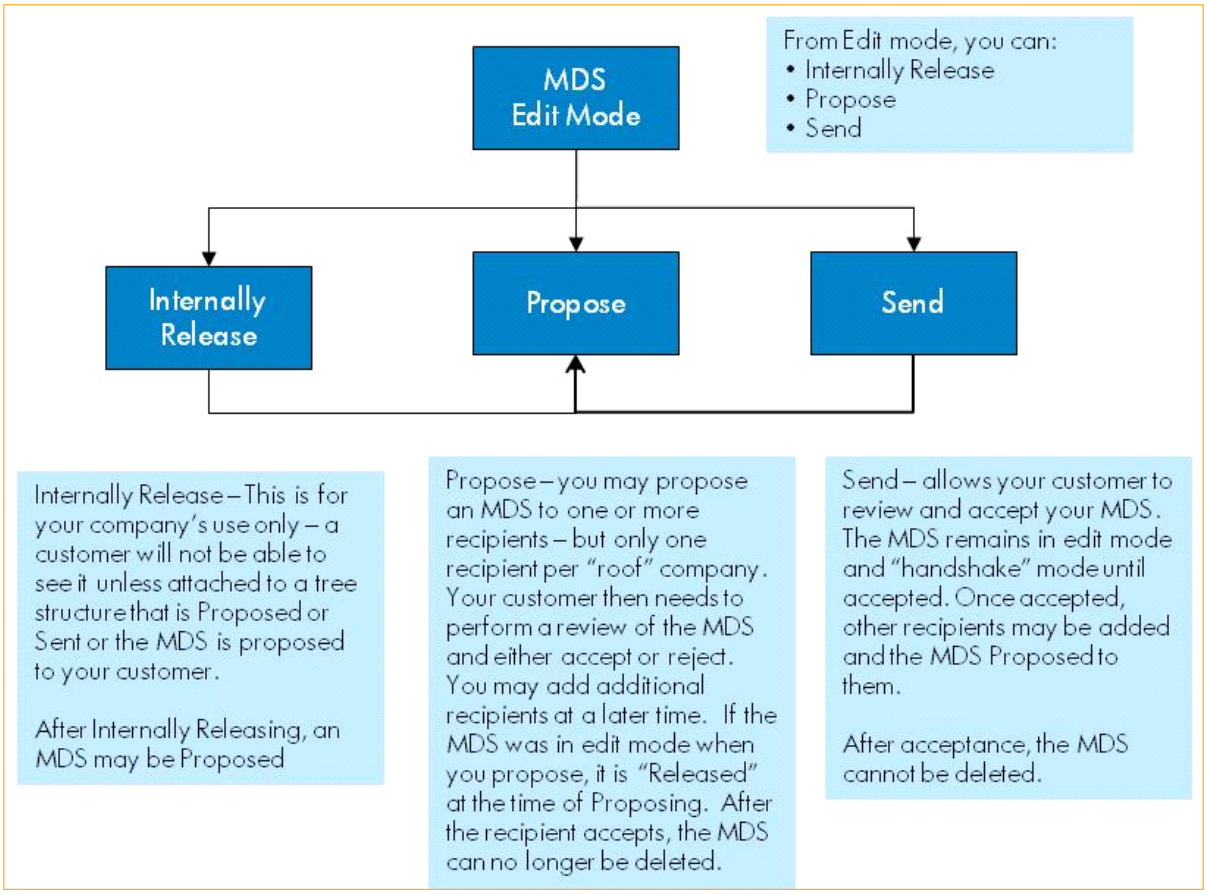
The following table gives the definition of the Recipient Data Screen icons:

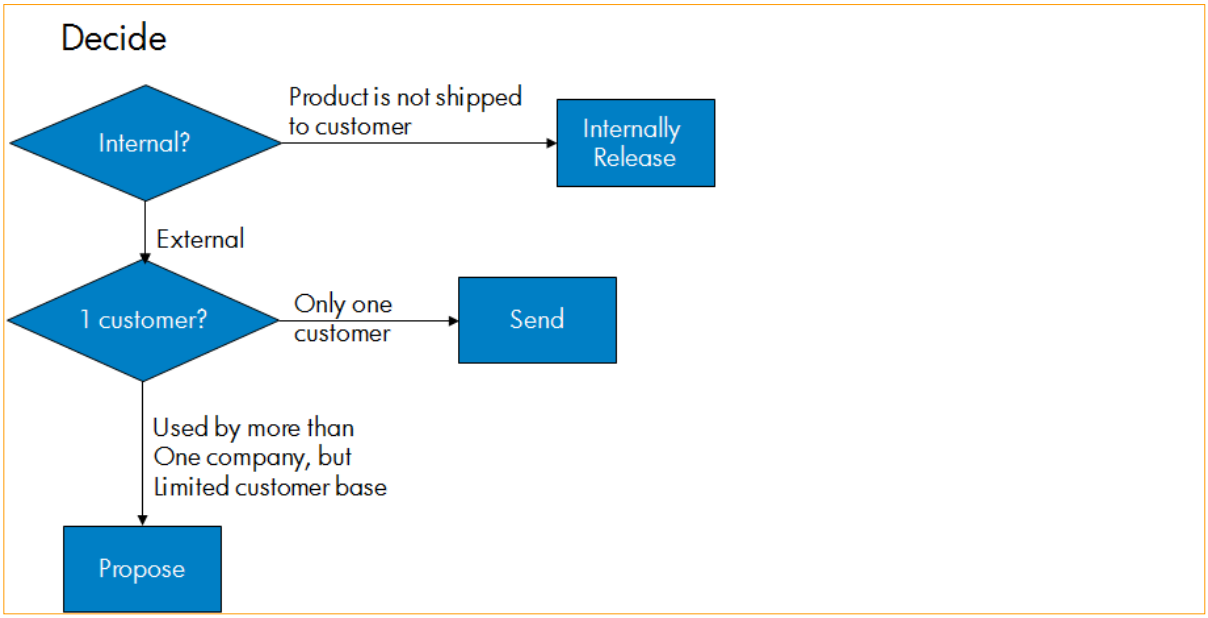
Icon	Action	Description
	Add Recipient	This button opens the company search screen where the user can find the recipient. Only companies registered in IMDS can be found in the company search screen.
	Remove Recipient	When a Recipient is highlighted, this button will not be disabled (greyed out) and you can use it to remove a Recipient.
	Propose	If there is at least one recipient in the Recipient list that has not received the MDS, this button will not be disabled (greyed out). This button initiates the **Propose** activity which includes internally releasing the MDS so no more changes can be made except to add Recipients.

3.3.13 Internally Release or Send / Propose an MDS

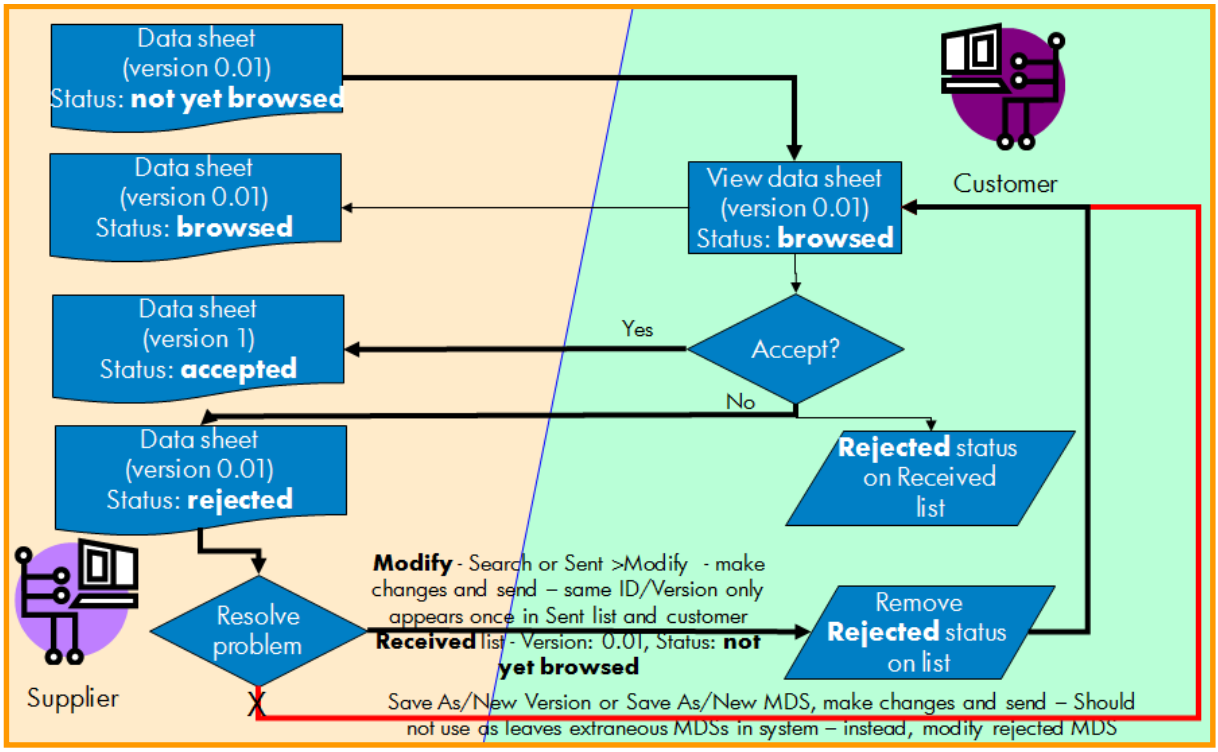
A user must **Send** or **Propose** an MDS to a customer, or the customer will never see the MDS. The following pictures explain how Internal Release, Send and Propose work:

What to do with MDS in Edit Mode?


MDS
Edit Mode
From Edit mode, you can:
• Internally Release
• Propose
• Send
Internally Release
Propose
Send
Internally Release – This is for your company's use only – a customer will not be able to see it unless attached to a tree structure that is Proposed or Sent or the MDS is proposed to your customer.
After Internally Releasing, an MDS may be Proposed
Propose – you may propose an MDS to one or more recipients – but only one recipient per "roof" company. Your customer then needs to perform a review of the MDS and either accept or reject. You may add additional recipients at a later time. If the MDS was in edit mode when you propose, it is "Released" at the time of Proposing. After the recipient accepts, the MDS can no longer be deleted.
Send – allows your customer to review and accept your MDS. The MDS remains in edit mode and "handshake" mode until accepted. Once accepted, other recipients may be added and the MDS Proposed to them.
After acceptance, the MDS cannot be deleted.


Decide
Internal?
Product is not shipped to customer
Internally Release
External
1 customer?
Only one customer
Send
Used by more than One company, but Limited customer base
Propose

How Send/Receive Works


Data sheet (version 0.01) Status: not yet browsed
Data sheet (version 0.01) Status: browsed
Data sheet (version 1) Status: accepted
Data sheet (version 0.01) Status: rejected
View data sheet (version 0.01) Status: browsed
Customer
Yes
Accept?
No
Rejected status on Received list
Supplier
Resolve problem
Modify - Search or Sent >Modify - make changes and send – same ID/Version only appears once in Sent list and customer Received list - Version: 0.01, Status: not yet browsed
Remove Rejected status on list
Save As/New Version or Save As/New MDS, make changes and send – Should not use as leaves extraneous MDSs in system – instead, modify rejected MDS

When a company sends an MDS to a recipient company, IMDS will check whether the sending Org.-unit has previously provided any MDS with the same recipient part number and supplier code to the receiving Org.-unit. If the sending Org.-unit has previously done so, new MDSs for the same recipient part number and supplier code must have the same MDS ID as the previous submission for that recipient.

Sending and proposing a MDS to a customer

When sending/proposing, the IMDS check routine will compare

- The type, MDS ID and version of the current MDS
- All the recipients for the MDS
- All the recipient specific part numbers and supplier codes
- The MDS ID and version of all previous MDSs sent by this supplier Org.-unit for this recipient part number and supplier code to these recipient Org. units

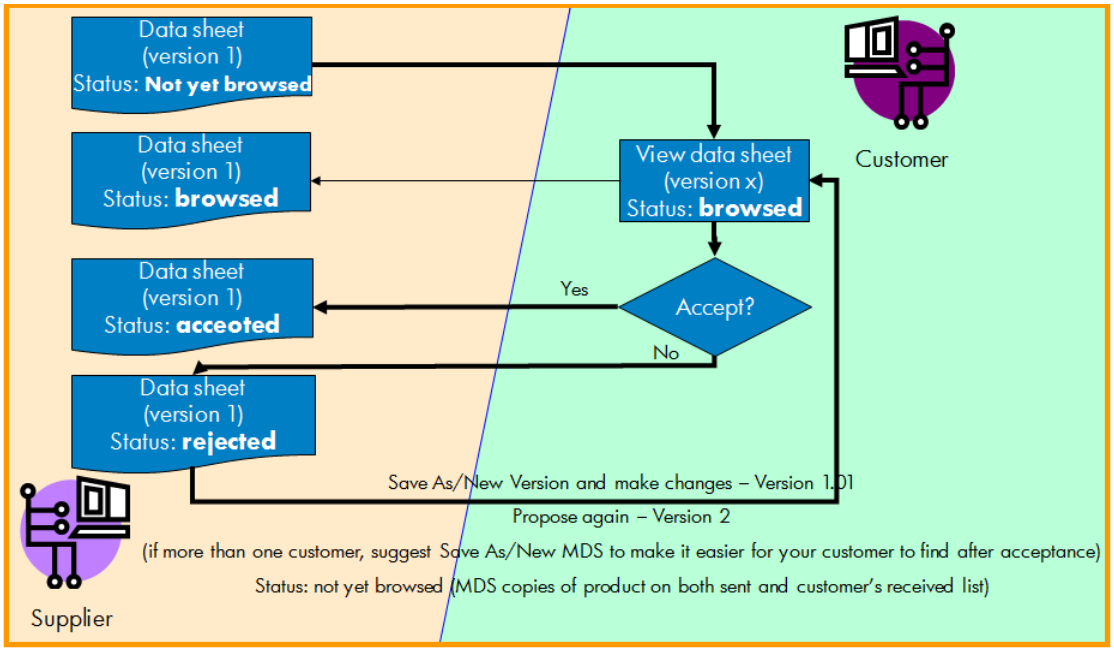
The check routine will compare and determine whether the supplier has send the recipient part numbers for these recipients previously. If there is a match, a Warning will be issued

indicating a Recommendation 001 Rule 3.2.2.B violation, and the ID of the previous MDS(s) with the same recipient part number(s) will be listed.

If the check routine does not find a match of the combination 'recipient org. unit', 'recipient part number' and 'supplier code', and the version ID of the MDS is greater than 1.0 the system generates a warning indicating a new part number or supplier code is required to comply to rule 3.2.2.A.

If the check routine does not find a match of the combination 'recipient company', 'recipient part number' and 'supplier code', and the version ID of the MDS is greater than 1.0 the system generates a warning indicating a new part number or supplier code is required to comply to rule 3.2.2.A.

How Propose/Receive Works

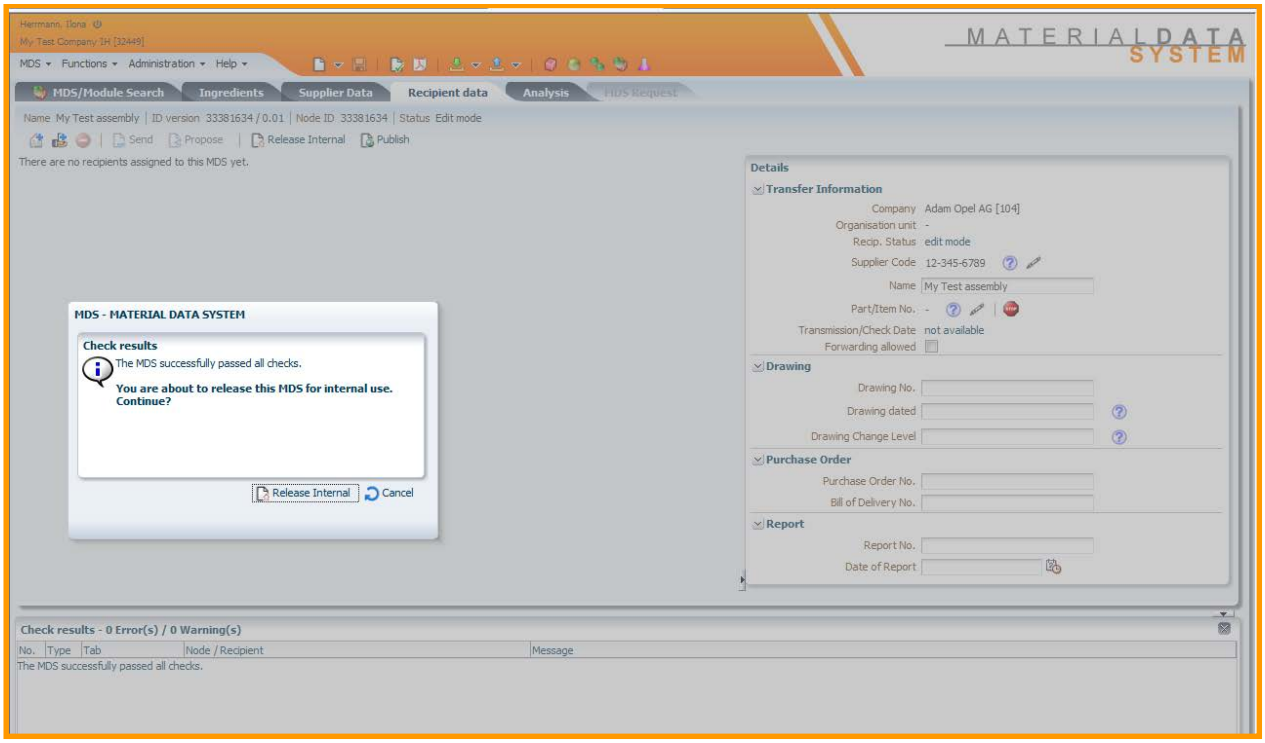

Data sheet (version 1) Status: Not yet browsed
Data sheet (version 1) Status: browsed
Data sheet (version 1) Status: acceoted
Data sheet (version 1) Status: rejected
View data sheet (version x) Status: browsed
Customer
Yes
Accept?
No
Save As/New Version and make changes – Version 1.01
Propose again – Version 2
(if more than one customer, suggest Save As/New MDS to make it easier for your customer to find after acceptance)
Status: not yet browsed (MDS copies of product on both sent and customer's received list)
Supplier

3.3.14 Check Procedure

When MDS → Check is chosen from the menu or toolbar, the check procedure is initiated. This compares the MDS against all the general and recipient-specific rules and error messages. The results are displayed in the Check-Log.

Errors must be corrected before the MDS can be internally released, sent, or proposed. Warnings do not prevent continued MDS transactions. However, depending on the Warning, the customer may require the MDS creator to fix the warning before accepting the submission. The customer may also run a check upon an MDS in the Inbox to see what warnings may have been ignored. Customers may also use IMDSa2 or IMDS AI, which allows for checks beyond those incorporated in "core" IMDS

If no issues are found, the check results window will display "check successful". The user may then use Internal Release, Send, Propose, or in some cases Publish successfully.


MDS - MATERIAL DATA SYSTEM
Check results
The MDS successfully passed all checks.
You are about to release this MDS for internal use.
Continue?
Release Internal
Cancel
Check results - 0 Error(s) / 0 Warning(s)
The MDS successfully passed all checks.

Most IMDS check rules derive from The IMDS Steering Committee "Recommendations" describing the rules which apply to MDSs. {Note: In the users mind, it might be appropriate to substitute the word "mandates" for Recommendations, as OEMS rarely if ever accept an MDS which is not completely compliant with the Recommendations.

One topic addressed extensively in the Recommendations pertains to the permissible tolerance for the weights of substances in a material, or of materials in a component. Depending on the situation, there are different requirements on the maximum separation between the minimum and maximum values of the range.

1. For materials attached to materials or semi-components and for semi-components attached to semi-components

If the material or semi-component is not from an MDS published by the IMDS Steering Committee, the following values apply:

Range from Lower Limit (LL) to Upper Limit (UL)	Maximum M = UL% - LL%
0 < LL ≤ 100	M ≤ 20

2. For basic substances attached to materials

If the basic substance is not part of an MDS material published by the Steering Committee or ILI and the substance is attached to a material (all classifications) the following applies:

Range from Lower Limit (LL) to Upper Limit (UL)	Maximum M = UL% - LL%
0 ≤ LL ≤ 7.5	M ≤ 3
7.5 < LL ≤ 20	M ≤ 5
20 < LL ≤ 100	M ≤ 10

3. Substances

There are 3 types of substances –

1. Substances listed by specific CAS (Chemical Abstract Service) Number
2. Pseudo-substances – substances that do not have a CAS number (there is a – in the CAS number field) that completely describe the cured substance
3. Jokers/wildcards – A highly confidential, non-declarable, non-prohibited substance "replacement" containing the word "system" as the CAS number. These do not describe the substance used.

Recommendation 001 states all IMDS materials (except select IMDS Committee materials) must be ≥ 90% declared. In other words, says no material may contain more than 10% unspecified or confidential substances. (An item which displays "Not specified" is a joker/wild card). If the portion of a substance is declared as a range, the upper limit of the range is used. The sum of the maximum portions shall not exceed 10% for each material in an MDS, unless the MDS has been published by ILI or Steering Committee. If the sum exceeds this 10% limit, IMDS generates a warning.

Only substances present in the product when on a dealership showroom floor should be entered in an MDS. Processing chemicals should not to be entered (unless residuals remain in the finished product as sold to consumers.)

IMDS provides a special MDS "Development Sample Report" flag. As the name implies, an MDS with this flag is a prototype or test product, and is allowed certain liberties. The wildcard "not yet specified" is allowed only in development sample MDSs. This joker/wildcard is not permitted in materials for final (PPAP/Initial Sample Report) MDSs. When an MDS (top node) does not have the Development Sample Report flag set, but one or more referenced items have the flag set, a warning message is generated.

4. Material and substance on the same level

A basic substance on the same level as a material will lead to an error.

5. Different MDS types at the same level

If different node types appear at the same level of an MDS, a warning is generated stating "Siblings must be all of same type".

6. Deleted MDSs

MDSs can be deleted in IMDS. Continued processing of deleted MDSs and their references degrade IMDS data quality. MDSs containing deactivated substances shall be excluded from further use. A Warning Message appears in case a foreign MDS is deleted. Additionally, the Check for own deleted MDSs results in an Error.

7. Special Check for Semi-Components

In semi-components created since release of IMDS 7.0, the usage weight type (kg/m, kg/m^2 or kg/m^3) of the semi-component must be entered. An error for newly created MDSs/Modules of type semi-component (in 'Edit mode') is generated if the weight type is missing or specific weight entered equals to zero for all MDSs since Feb. 16th, 2010.

Semi-component MDSs created by ZVEI-Rec019 (Company ID 102677) are excluded from the following checks:

- No check of 10% - rule for confidential substances, including wildcards for highly confidential substances
- No material substance checks (known as SC90 checks)
- No substance range checks

These checks may be conducted for received datasheets before acceptance.

Owned MDSs may be checked before being proposed, published, or referenced in another MDS. In these circumstances, the "check" icon on the toolbar will appear active (enabled).

Until IMDS Release 6.0, internally released MDSs which passed all checks when released could be proposed or published even when containing elements that did not pass check rules in force at the time. This is no longer the case. When preparing to propose or publish an older released MDS, run a check to ensure the MDS meets current check requirements.

The following checks are performed against referenced items and may generate warnings:

a. Range of portion must not exceed allowed percentage
b. 10%-Rule for not specified substances
c. Different node types on same level

8. Special checks when creating materials

If a new material is created or an existing material is referenced, the IMDS check procedure will incorporate the following checks:

1. IMDS Steering Committee materials from companies IMDS-Committee (423), IMDS-Committee/ILI Metals (18986), and Stahl und Eisenliste (313) are excluded from material checks
2. Depending upon the chosen material classification, a material must contain one or more specified substances in a defined minimum concentration. Other substances must not exceed a defined range.
3. If a material contains certain substances with a content of more than certain percentages it has to possess a certain classification connected to this substance. Material Classifications 7.3 (Other compounds (e.g. friction linings)) and 8.x (Electronics/Electrics) are valid for all substance compositions.
4. If a material contains a liquid or a gaseous substance with a content of more than 1% and does not possess a classification 9.x, or if the material contains a special basic substance with a content of more than 1%, a corresponding warning will be displayed. Water can be contained in material of classification 7.1 (Modified organic natural materials) in any percentage without warning.

5. If a material consists of one or more sub-materials, the top-level material is checked and the percentages calculated accordingly for the total amount.
6. For Material MDSs containing inactive substances an Error appears if the company is the MDS Creator. For Material MDSs containing inactive substances a Warning appears if the company is not the owner.
7. Identify correct material classification to propose the correct material category - An IMDS user defines the material category early in the create MMDS process. Ingredients added during the material definition can change the composition to a different material category. To ensure correct category selection, added ingredients cause the IMDS check routine to use the existing SC90 checks to verify the category. If the enhanced check suspects a different material category, IMDS will issue a warning and suggest possible material categories.
8. A substance marked as confidential MUST have a valid CAS or EINECS # - Basic substances without valid identifiers (CAS or EINECS numbers) may not be hidden as confidential substances. The IMDS check routine will issue an error if a substance marked confidential does not have a valid CAS or EINECS number.
9. When releasing a Material MDS, the user must confirm that all GADSL substances in this MDS are declared by selecting a check box. The text is "I have declared all GADSL substances." This implies that GADSL substances must not be included as part of a Wildcard.
10. 10%-rule applied on top-material for all 5.x material classifications - IMDS calculates for all 5.x material classifications on the top-material level.
11. Check for Material MDSs containing GADSL / REACH-SVHC substances being flagged as confidential - The check procedure returns an Error message for all MDSs containing confidential substances of concern.

3.3.15 Publishing and Forwarding an MDS

Publishing

Published MDSs are accessible and completely visible to all IMDS users. Everyone in IMDS can see all substances included in the MDS, so never use "publish" for an MDS containing proprietary information. As with accepted MDSs, published MDSs cannot be deleted.

Many customers prefer suppliers to not use Publish or non-IMDS Committee published items. There are three primary reasons for this:

1. No one "accepts" a published MDS except the creating company. The standard IMDS checks are the only validation upon these MDSs, rendering quality questionable.
2. Customers have no option to "accept" or "reject" a published MDS.

3. Published materials are difficult to access from some offline systems.

Company Administrators decide whether a company may publish MDSs and if so, of what types (component, semi-component, material). Company Administrators may restrict publishing to specific Organization Units. If allowed, Company Administrators and users with a "User (publish)" profile may publish. User and User (Certification) profiles may not publish.

The special checks mentioned on the previous page do not apply to IMDS Committee materials. Committee MDSs are published by the companies IMDS-Committee (423), IMDS-Committee/ILI Metals (18986), and Stahl und Eisenliste (313). These materials can and should be used for Standard materials. Those MDSs are authored by IMDS experts, screened extensively for valid content, and are considered the "Gold Standard" for published standard materials. Committee materials as well as ZVEI-Rec019 datasheets are excluded from most IMDS material checks.

Forwarding

MDS forwarding is designed for suppliers such as distributors who do not manufacturer a product but are the provider of record. The forward option allows an MDS from a supplier to be proposed directly to a customer. No changes are permitted to the ingredients page of the received/forwarded MDS. If forwarding is allowed, the forwarder must populate the Supplier Data with their company information, choose a recipient or several recipients on the recipients tab, and pass this unchanged MDS to the customer.

The following rules apply if forwarding is used:

- Suppliers must select the "Forwarding allowed" checkbox on the recipient page of the MDS. Otherwise the MDS may not be forwarded.
- Only accepted MDSs may be forwarded.
- There may be only one forward version of an accepted MDS.
- A forwarded MDS may be proposed, but not sent or internally released.
- A forwarded MDS may not be edited (except for Supplier and Recipient Data).
- A forwarded MDS may not be referenced (except as accepted).

MDSs from different sources could be forwarded with identical part numbers in the recipient-specific fields. When a supplier attempts to forward an MDS to a recipient, the check routine will scan the outbox for the MDSs already sent to this recipient and collect the recipient part numbers, supplier codes and MDS IDs. If there are similar but not identical MDS IDs but a matching combination of supplier code and part number, the check routine informs the user that

the recipient has already received one or more MDSs matching the customer part number (same supplier code) with different MDS IDs.

Because version handling is supported, the system will provide the user with the list of MDSs for the same recipient part numbers and offer one of them for selection (rule 3.2.2.B). After the user selected one of the suggested MDSs the IMDS will change the MDS ID and version of the forwarded MDS that it fits to the version concept.

If there is no match of part number, supplier code and MDS ID, the check verifies the version of the MDS to be forwarded is less or equal to 1.0, thus satisfying rule 3.2.2.A. If the version ID is greater than 1.0 a warning will be issued indicating a new MDS ID needs to be provided for a new part number or supplier code.

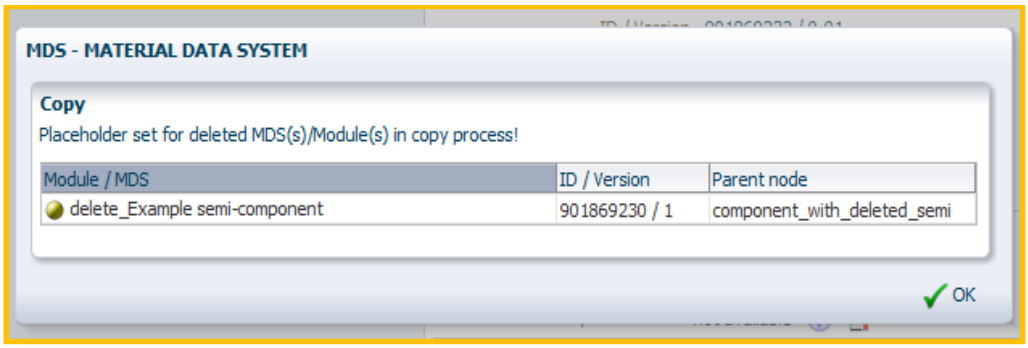
3.3.16 Copying an MDS and Copying an MDS with a logically deleted reference

To copy an owned MDS, search then select the MDS and select **Copy.** In the resulting window, choose to create a new copy (Copy/New Datasheet) or a new version (Copy/New Version). If Copy/New Datasheet is used, the new MDS gets a new IMDS ID and the initial name is as **Copy_*<name of copied material datasheet>***.

Normally the only available option for a non-owned MDS is Copy/New Datasheet, The one exception is a received and accepted MDS on which the supplier allowed forwarding. In this instance, an additional Forward option is also provided.

When copying an MDS containing references to other MDSs, these references remain intact, complete with version information present in the original MDS. **An MDS new version or copy does not "update" referenced MDSs to newer versions than existed on the original MDS.**

There are occasions when a referenced MDS may be deleted. Perhaps the most common of these is the case of "expired" IMDS Committee material MDSs, which are purged when a "standard" material changes in composition to eliminate a prohibited or declarable substance. Once deleted, this MDS cannot be used. Therefore, when copying an MDS with a deleted MDS attached, the deleted MDS is removed from the copy, and the deleted node is replaced with a placeholder "dummy node" containing text describing the deleted information.



Similarly, when copying an accepted MDS which contains substances marked confidential, these unknown confidential substances are replaced in the copy with new modules which must be edited. After creating these modules, the user is returned to the copied datasheet.

However, MDS copies make it harder to maintain and provide updates for the original data. Material MDSs should not be copied, but created and updated only by the material manufacturers.

With IMDS Release 9.0 changes in copy capabilities were introduced:

- Material copies are only allowed for the owner/creator of a material
- Accepted or published materials cannot be copied
- Accepted or published components and semi-components may still be copied
- Accepted materials cannot be forwarded
- In a copy of an accepted or published (semi-)component all references are maintained
- For components and semi-components, users may copy a foreign (not accessible) reference in the ingredients tree to permit changes.

3.3.17 Delete an MDS or delete the Recipient of an MDS

The IMDS Delete function does not actually delete an MDS from the system. Delete hides an MDS and blocks it from being referenced. IMDS does not have an undelete function, so a user must be absolutely certain before deleting an MDS. An IMDS User does not have to create an MDS to delete it. Any properly authorized IMDS user in the company can delete owned MDSs. Un-owned MDSs, including MDS in the In Box, cannot be deleted.

Extra care is needed when deleting IMDS materials as they are multi-lingual, with both English and German names and trade names shown in the search results. Before deleting a material, check whether the material exists under another name but with the same MDS ID and Version. One cannot be deleted without deleting both!

A deleted MDS will continue to appear on any component, semi-component, or material to which it was attached prior to deletion. If this MDS was productive (released, published, sent, or proposed) prior to the attached MDS deletion, the MDS may be used in any existing or future MDS. However, the deleted MDS will not propagate into new versions or copies of MDSs. Instead, an error will be generated, and the deleted MDS must be replaced.

Before deleting an MDS, consider the following questions:

- Has the MDS been attached to another MDS?
- Has the MDS been sent to anyone?
- Is there more than one version of this MDS?

The answers to these issues are described in the following paragraphs.

Has the MDS been attached?

Whether attached or not, the MDS will only be logically deleted. It is marked deleted and cannot be searched or referenced, but remains visible in MDSs where it has been used.

Has the MDS been sent to anyone?

An unaccepted sent or proposed MDS is logically deleted and the receiving company or companies are notified of the deletion, but are still able to see this MDS in the received list with status “cbs”, i.e. cancelled by sender. The MDS is no longer available for attachment.

Is there more than one version of the MDS?

If an MDS has more than one version, the user has the opportunity to delete all versions at once. This can be convenient, for example, if a production run has been replaced. Upon deletion confirmation of the highlighted MDS, the system logically deletes the highlighted MDS and if there more versions exist, asks if the user would like to delete all versions.

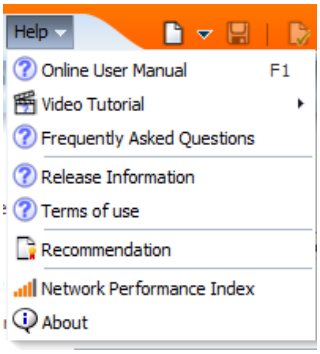
Deletion of a Recipient (also see section 3.3.12)

Frequently, an MDS may be sent to the incorrect company. When this occurs, rather than delete the MDS, it often makes sense to simply delete the recipient. Use the Search option to find the MDS and select **Modify**. Go to the recipients tab, highlight the incorrect recipient and click **Delete**. The status of the MDS at the incorrect recipient will change to “cbs” (Cancelled by sender).

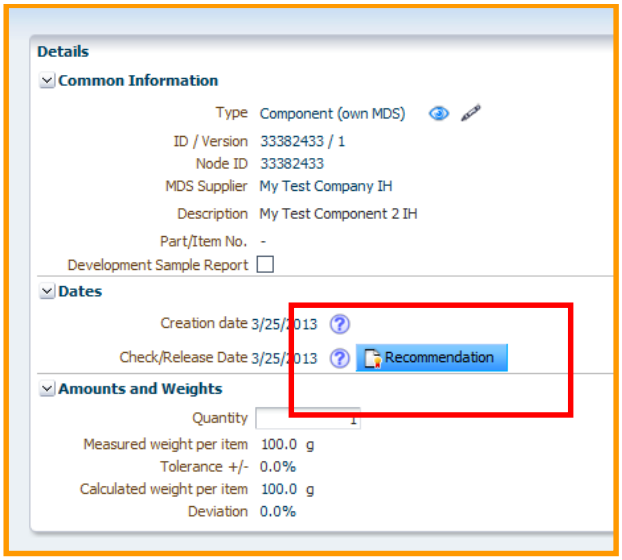
Note: there is no way to remove the deleted MDS’s from the sent or received list except by filtering to exclude MDSs with status “ cbs” from these screens.

3.4 Recommendations

The IMDS Steering Committee has published several Recommendations pertaining to MDS creation. Recommendation 001 applies for all MDSs, with other Recommendations focusing upon MDSs in specific classifications. The Recommendations can be found in the **Help** menu.



Alternatively, the Recommendations screen can be accessed from the right side of every IMDS MDS "details" window.



As previously noted, while referred to as "Recommendations", OEMS rarely if ever accept an MDS which is not completely compliant with the Recommendations. We highly recommend reading the recommendations that pertain to your products.

Recommendations are frequently added and updated; it is a good idea to check for updates each time you login.

4 Operating with an MDS

4.1 Data Transfer from Supplier to Recipient

It is essential for IMDS users to understand how information in IMDS is managed and secured. IMDS users connect to the secure IMDS Server cluster at HP. Information entered or changed by an IMDS user within a non-released MDS is visible only within the user's company. Unless granted "Trusted User" access by a Company Administrator, no user from another IMDS company can access the MDS, or even know it exists, while other users in the same company have full edit and delete rights if they have an appropriate profile.

When a user sends or proposes an MDS to a customer, one can speak of "virtual" sending, but the MDS is not really sent (e.g. via e-mail) to the customer. The MDS usually remains physically on the HP server. A link is created between the user company and the recipient company for this MDS, and the recipient company is granted visibility to that MDS version.

After receiving the MDS, a customer company user can read the MDS, and accept it or not. The MDS information is never physically transmitted on the internet "information highway", but always remains within the protected area of the HP server. When an MDS is sent, IMDS initially ensures only the customer company named as a recipient can see the MDS. No other company has any access to it.

When a customer attaches an MDS you have submitted to their MDS, and then sends their MDS to their customer, their customer may see the structure of your MDS. However, they will not see information about your company. For the most part, it will appear as though their supplier (your customer) created and submitted the entire tree structure. The only exception is if an attached MDS is published, in which case everyone in the supply chain can see who supplied the data. This is one of many reasons Publish should be used rarely if at all, and never without good reasons for doing so.

Some companies (Tier 1s and OEMs) have in-house systems to manage their IMDS data and product lifecycle, and have paid for the capability to download IMDS information visible to them into their in-house systems. Even with download capability, these companies may only view the supplier information from their direct suppliers (unless a lower-tier MDS is published). All companies who download have signed a separate license agreement that protects IMDS data security. IMDS has been operational with downloads for over a decade without us being aware of a single severe client data breach. We are proud of this record, and will continue to do everything possible to maintain it.

4.2 MDS Confidentiality

4.2.1 Inside the company

Some companies creating material data sheets of type materials (Material MDSs) do not want all the employees within their company accessing confidential substance information, so the visibility of confidential substances in owned Material MDSs must be managed at the user level.

In the IMDS Admin -> User screen, the Company Administrators have a 'Confidential Substances Visible' checkbox by which they may authorize Users within the company to see confidential substances. For new users the default setting will be 'OFF'. The setting for visibility of confidential substances is displayed on the User Settings screen as a Read-Only view option. (see 8.6.2 Create a User)

Additionally, Company Administrators can authorize users to see confidential substances from their own company in the Trust User screen (see below 4.2.2 Outside the company).

The visibility for confidential substances is no longer granted at the company level. A user without this access right is not able to add or edit confidential substances in Material MDSs within their own company. The same applies to copied Material MDS: If a user without access rights to confidential substances copies a Material MDS with confidential substances, the confidential substances se are not part of the copied MDS. Hence, the user is not able to add confidential substances. Place holders for the confidential substances are tagged in the MMDS tree.

4.2.2 Outside the company

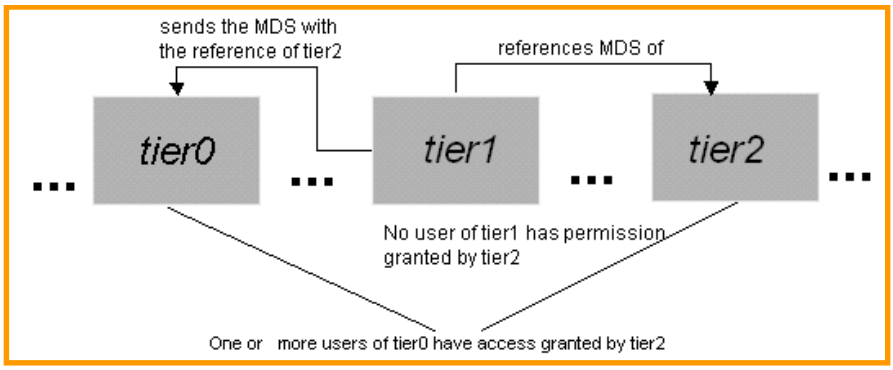
A company may guarantee the confidentiality of specific MDS information through use of the “confidential” flag. When this flag is set for specific basic substances, these substances are replaced with a generic “confidential substance” label when the MDS is sent or proposed to a customer. Confidentiality restricts display of these substances to the company which created the MDS, and to those from other companies granted “Trusted user” access. . This protects certain “ingredients” and recipes. A supplier must not mark any declarable or prohibited substance as confidential or highly confidential (joker/wildcard). Many customers will not accept an MDS with more than 10% of the materials using undeclared substances (including those marked confidential). IMDS will not permit an MDS with more than 10% of the substances marked highly confidential (joker/wildcard).

Confidentiality is not applied to basic substance analysis or to a basic substance where used analysis, as these analyses do not reveal information about the structure of the MDS.

When a user in another IMDS company requires visibility to substances marked confidential, the Company Administrator of the company that creates the material MDS can grant specific users in another IMDS company visibility through the Administration > “Trust User:” option. Outside of IMDS, two companies may exchange a statement of confidentiality stating named IMDS users may see the confidential substances in the received material datasheets. Only users specifically granted “trust user” status can see the true substances underlying confidential substances.

The Trust User option is available to the Company Administrator on the Administration link. The Company Administrator can search for specific users and grant them visibility of confidential substances. If there is no permission granted the confidential substances are masked.

One result worth noting: Imagine the following scenario of a supply chain with three business partners:



In this scenario, specific IMDS Users at the Tier 0 company have been granted “Trust User” access into the company at Tier 2, but no IMDS users at the Tier 1 company enjoy Trust User access into the company at Tier 2. The Tier 2 MDS contains confidential substances. When a Tier1 user establishes their own MDS and references the received MDS of Tier2, The Tier 1 company cannot see Tier2’s confidential substances in the MDS, because no access is granted. After Tier 0 receives the Tier1 MDS, Tier 0 can see the confidential data in the sub-tree (referenced MDS) of Tier2, because tier2 granted access to the user of Tier 0.

In other words, once your company grants “Trust User” access to IMDS users of a company, those trusted users see the confidential substances in all your MDSs – regardless of whether the MDS has been sent directly, or indirectly as a reference in another supplier’s MDS. This also applies for published MDSs. This scenario applies everywhere in the supply chain, even through a chain of several business partners (here only 3), at the end of the chain (car manufacturer as last element) and at the beginning (raw material producers as first element).

Note: The IMDS Company Administrator of an MDS creating company decides whether any IMDS users at other companies can see confidential substances in their materials.

4.3 MDS Request

The IMDS MDS Send and Propose functions both begin with a supplier transmitting an MDS to a customer. The MDS Request function is a mechanism by which a customer sends a request for an MDS to a supplier. Before using MDS Request, the customer and their suppliers must establish a dialogue outside of the IMDS system to agree the MDS Request function will be used to communicate requirements and to identify the lead supplier to whom Requests will be sent. This section details how to use the MDS Request function.

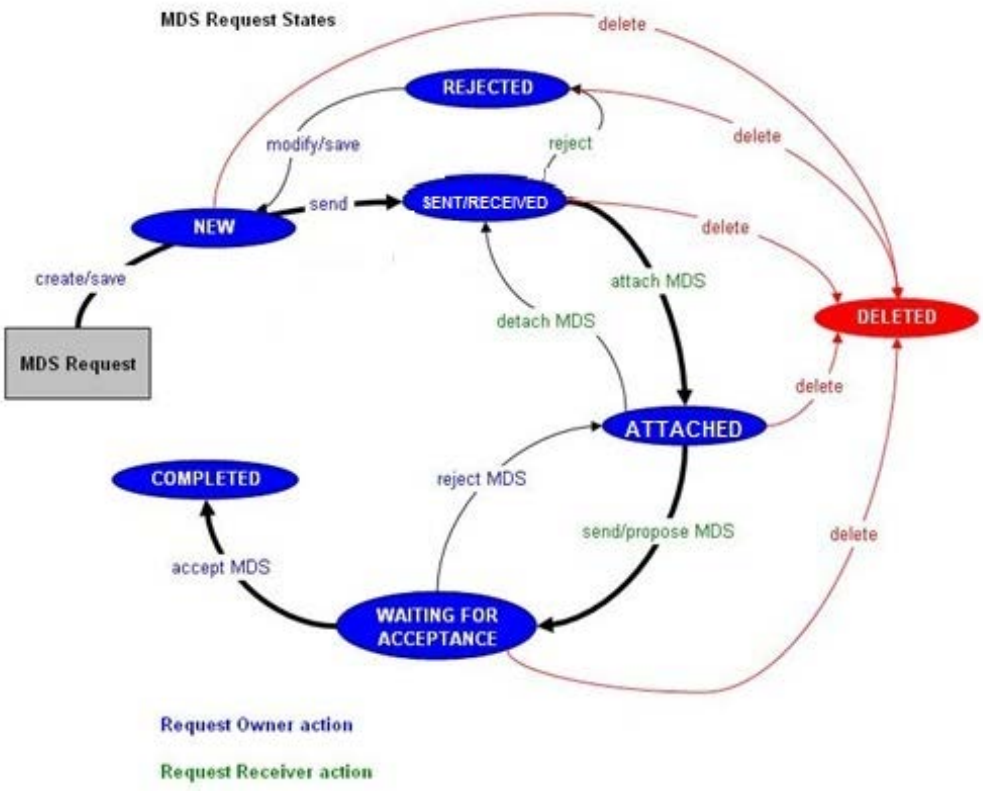
4.3.1 Parts of a Request

A Request tells a supplier which attributes the MDS must have (mandatory) and the expected value of select attributes.

The Request itself consists of:

- A set of mandatory MDS attributes (base and recipient-specific)
- Requested values (optional) for mandatory MDS attributes (recipient specific only).
- Request specific Administrative data

The following figure depicts the workflow associated with an MDS Request:



4.3.2 Request Terms: Recipient vs. Supplier

An MDS Recipient creates a Request to an MDS Supplier. Thus, an MDS Recipient is the Request Owner (=Requestor) and the MDS Supplier is the Request Recipient (=Recipient). To avoid confusion, the terms **Requestor** and **Recipient** are used.

Therefore, in the MDS Request Inbox, the requesting company (your customer) is the MDS Recipient and your company is the MDS Supplier, whereas in the MDS Request Outbox, your company is the MDS Recipient and the supplier company receiving the MDS Request is the MDS Supplier.

4.3.3 MDS Attributes

Requested attributes can be segmented into two types: **Base Attributes** and **MDS Recipient Specific Attributes**. The Requestor (MDS Recipient) indicates what data they expect in the request. Most information is optional. However, the MDS attribute “Name” and the Due Date are required.

Base Attributes refer directly to the product and are the same for all MDS recipients. Base Attributes are:

- MDS type
- Entered weight
- Calculated weight

MDS Recipient Specific Attributes are data items that are associated with the Recipient Data tab on the MDS:

- Part/Item No. (mandatory)
- Name
- Drawing No.
- Drawing Change Level
- Purchase Order No.

Do not put any guidance information in the Attributes when creating a request. Requested values of attributes are automatically inserted into the assigned MDS data fields and cannot be overwritten. If they are empty, the MDS supplier has the option to enter his own values.

4.3.4 Administrative Data

Administrative data is data referring directly to the Request. This is data the Requestor (MDS Recipient) uses to manage the requests in their company, such as:

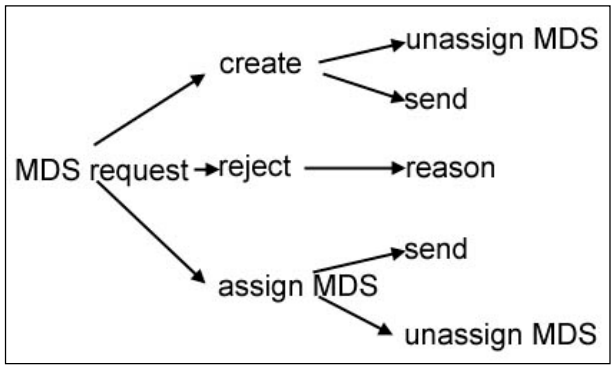
1. Project: Used to group requests. Projects are created by Company Administrators and are valid across MDS Recipient's company.
2. Company / Org-Unit: ID of MDS Recipient and Contact person
3. Deadline Date: The date by which the Recipient expects to receive the MDS
4. Comment: Mandatory for a rejection

4.3.5 MDS Request Statuses

The Request status describes:

- A new Request (status "new"),
- The request is sent to an MDS Supplier (status "received" for MDS Supplier, "sent" for Requestor),

- The MDS Recipient replies & sends Request (status “sent” for Requestor, “received” for MDS Supplier),
- The MDS Supplier has assigned an MDS but not sent it yet (status "working"),
- The MDS was sent (status "waiting for acceptance"),
- The MDS has been accepted (status "completed"),
- The Request receiver (MDS Supplier) rejected the request (status "rejected") or
- The Request was cancelled (status "deleted").



4.3.6 Creating Requests

As noted above, Projects provide a means for the MDS Recipient to group MDS Requests. The first step in using projects is to create a project. For the purposes of this section, it is assumed either projects are not being used (which are optional) or the project is already created.

All User profiles except Read-Only may create Requests. Attributes are as follows:

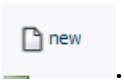
Field	Description
Type / Project	
Type	Type of MDS expected – Component, Semi-Component or Material
Supplier	The MDS supplier who will receive this request.
Deadline Date	The date the response is due. This is a required field.
Project	Project number the Request is assigned to.
Status	Request Status
ID	System generated – MDS Request ID
Recipient Data	

Field	Description
Company	System generated – IMDS name of company generating the request and where the supplier will send the response to the request.
Organization Unit	Drop down list of possible Organization Units to receive response.
Contact Person	System generated from User ID of person creating request.
Supplier Code	Enter the specific supplier code if it is required. The supplier will not be able to change the code.
Name	The Name is required. You may also enter the specific name. The supplier will not be able to change the code.
Part / Item No.	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Forwarding Allowed	Check the box if you require forwarding to be allowed.
Drawing No.	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Drawing Dated	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Drawing Change Level	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Purchase Order No.	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Bill of Delivery No.	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Report No.	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
Date of Report	Check the box if required. You may also enter a value. The supplier will not be able to change the code.
MDS	
Measured Weight per Item	Check this box if you require the value of Measured Weight per Item to be entered on all Components in the tree structure.
Parts Marking	Check this box if you require the Parts Marking question to be answered on all Components in the tree structure.

Field	Description
Specific Weight	Check this box if you require the Specific Weight to be given on all Semi-Components in the tree structure.
Symbol	Check this box if you require a Symbol on all materials in the tree structure.
Standard Material No.	Check this box if you require a Standard Material Number on all materials in the tree structure.

4.3.7 Creating Projects

Projects group Requests and are valid company-wide. Projects are created on the Create Request screen. Start by clicking on the **edit** next to the Project field. A new popup window will appear. To create a project, click

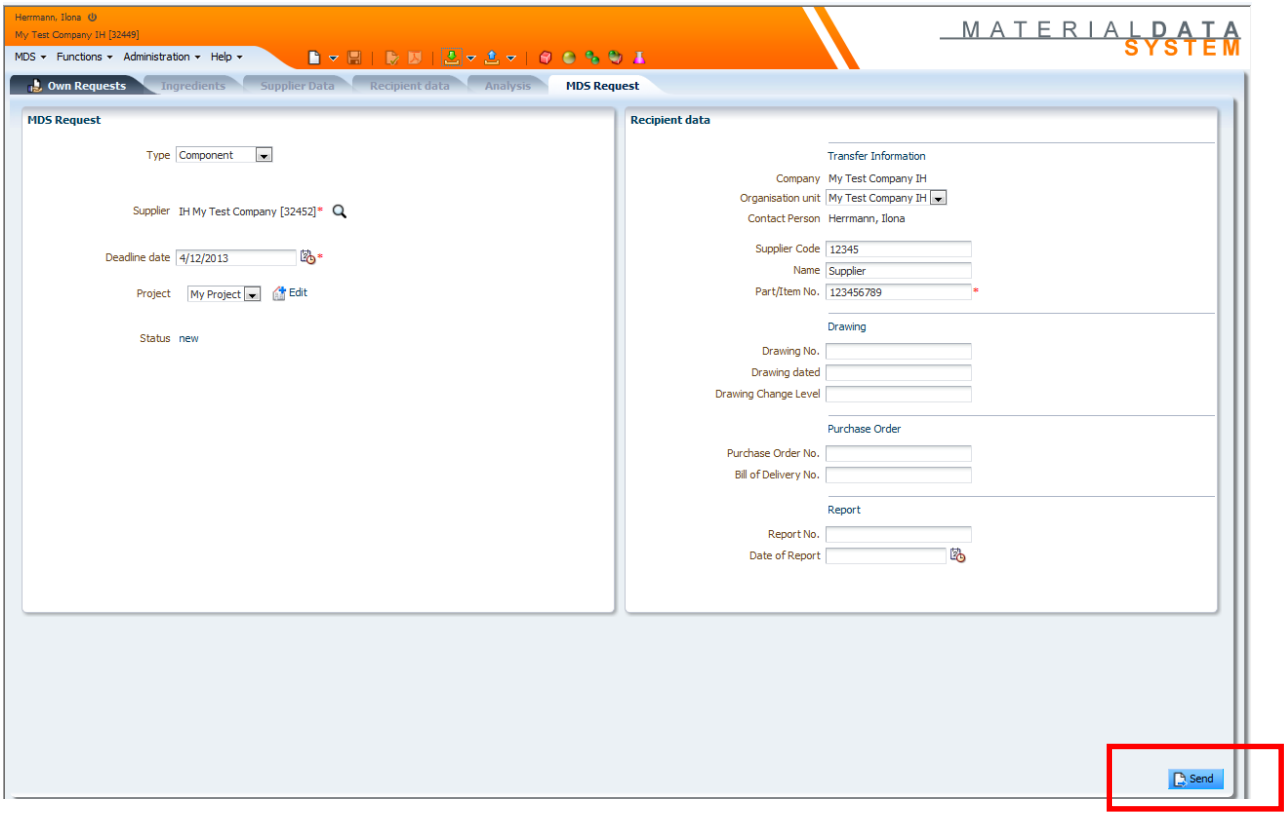


.

Another new popup window will appear. Enter the Project name. To exit this window, click **Save**. The new project will be in the list at the bottom of the window. Click it to highlight the project and then **Apply**. The Request window appears.

4.3.8 Completing the Request

After all data are entered, use the icon on the toolbar. The system will perform a check. After the Request is saved successfully, a “Send” icon will appear on the lower right of the screen. This Send icon must be used to send the Request to the supplier.



Sending the assigned MDS to the MDS recipient changes the Request status to **waiting for acceptance**.

If an assigned MDS is sent, a Request-specific test is done to determine whether all mandatory fields are populated.

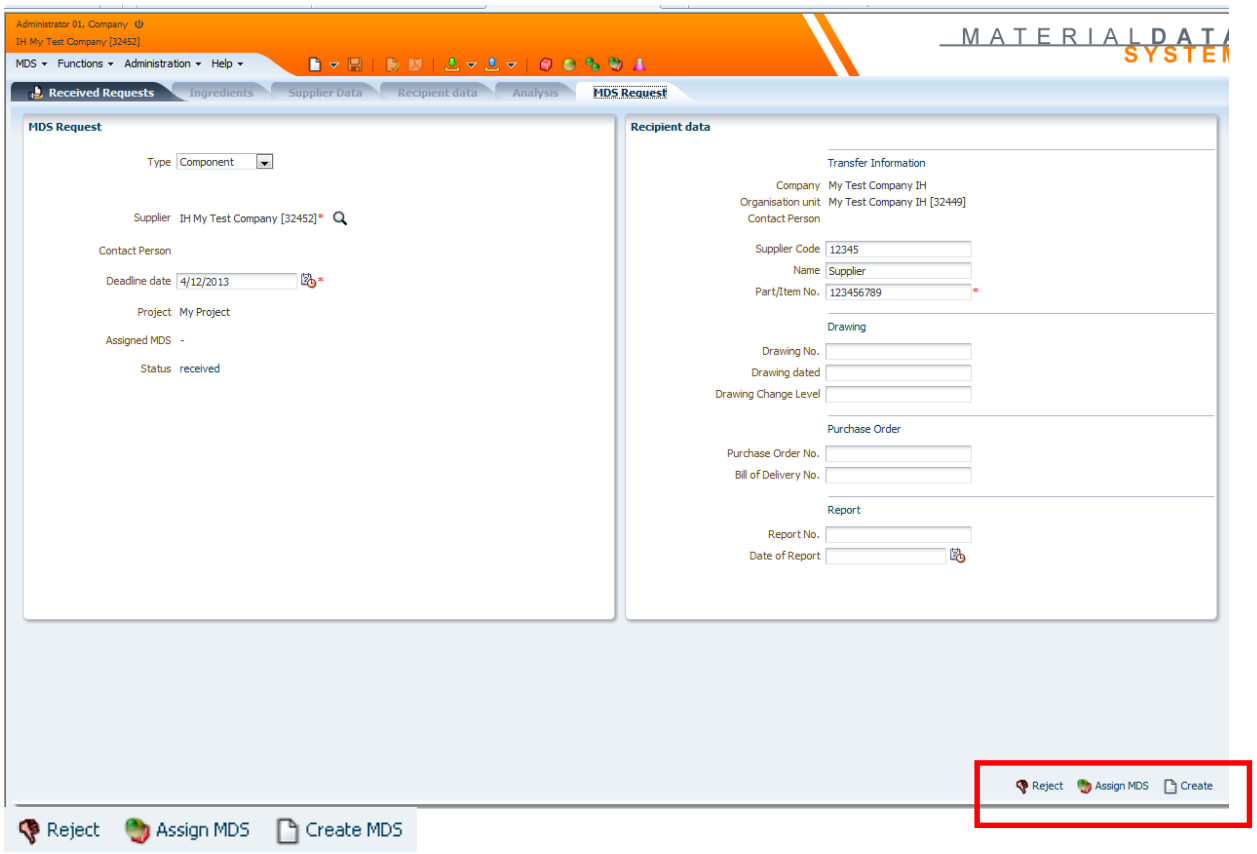
If the assigned MDS is rejected, the Request status changes back to **working**.

If the assigned MDS is accepted, the Request status changes to **completed**.

4.3.9 Rejecting a Request

Anyone who can create a Request or MDS can reject a Request. When a received Request cannot be handled by the MDS supplier, he may reject it and add a comment. It will get the status **rejected** for the MDS supplier and the MDS recipient. If the Request is rejected, a reject reason by the MDS supplier is mandatory.

After viewing a received Request, in the lower right of the screen you will see three (3) options.



To reject the Request, the Reject button must be used. The reject reason for the Request must then be entered.

4.3.10 Assign Existing MDS to Request

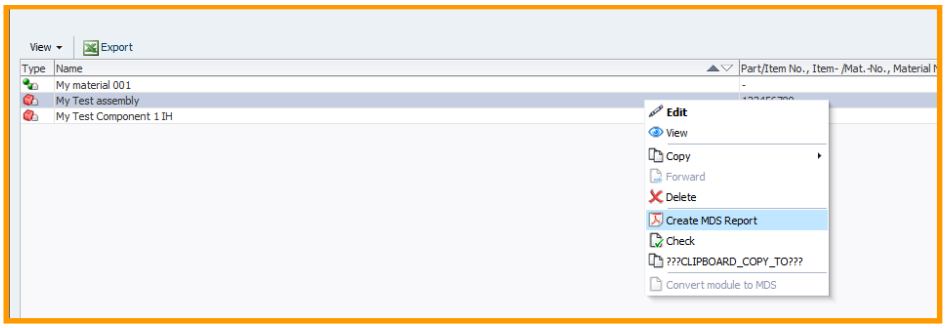
There are two possibilities to respond to a request: creating a new MDS or assigning an existing MDS. In this example, an existing MDS is assigned. Once Assign is selected, a window is opened to permit a search for an MDS of the correct type. It is only possible to attach an existing MDS created by the user's IMDS Company.

After assigning and saving, the status becomes "working".

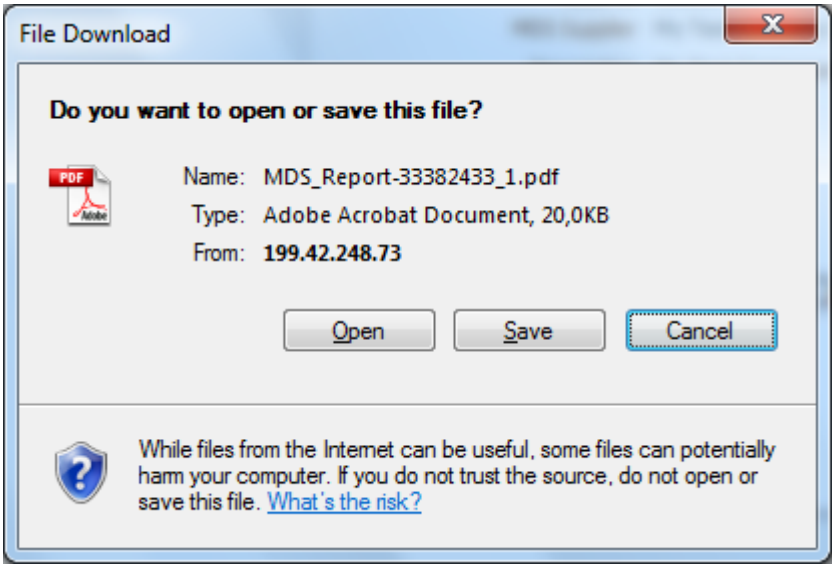
Should Create MDS be elected, a message will appear that the new MDS has been assigned to this request. The requested MDS recipient data is inserted automatically. The MDS needs to be created as explained in previous sections. Once the MDS is completed, the Recipient Data Screen is chosen, and any other required information must be supplied. The user may then Send/Propose to the Recipient in the normal fashion.

4.4 MDS Report

The MDS Report provides a .pdf file overview display for all MDSs created, received or sent. Initiate MDS report creation by right-clicking an item such as “own MDSs” in the search result table,

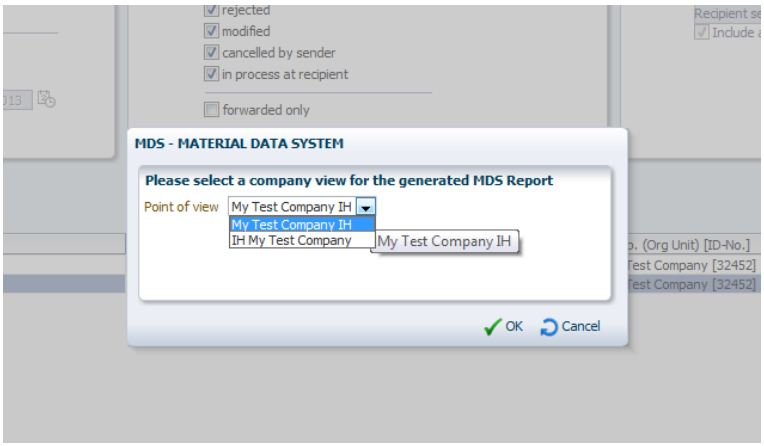


After report initiation, a message such as the following appears:


File Download
Do you want to open or save this file?
Name: MDS_Report-33382433_1.pdf
Type: Adobe Acrobat Document, 20,0KB
From: 199.42.248.73
Open
Save
Cancel
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

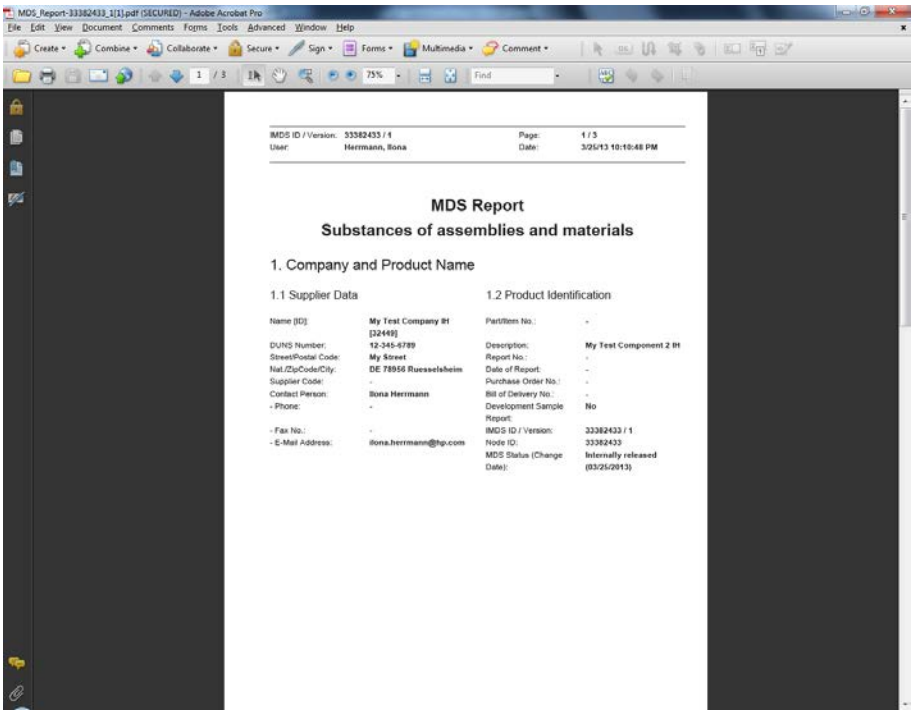
The standard report format is from the perspective of the sending. However, in some cases the report may also be displayed from the recipient’s point of view (the customer’s point of

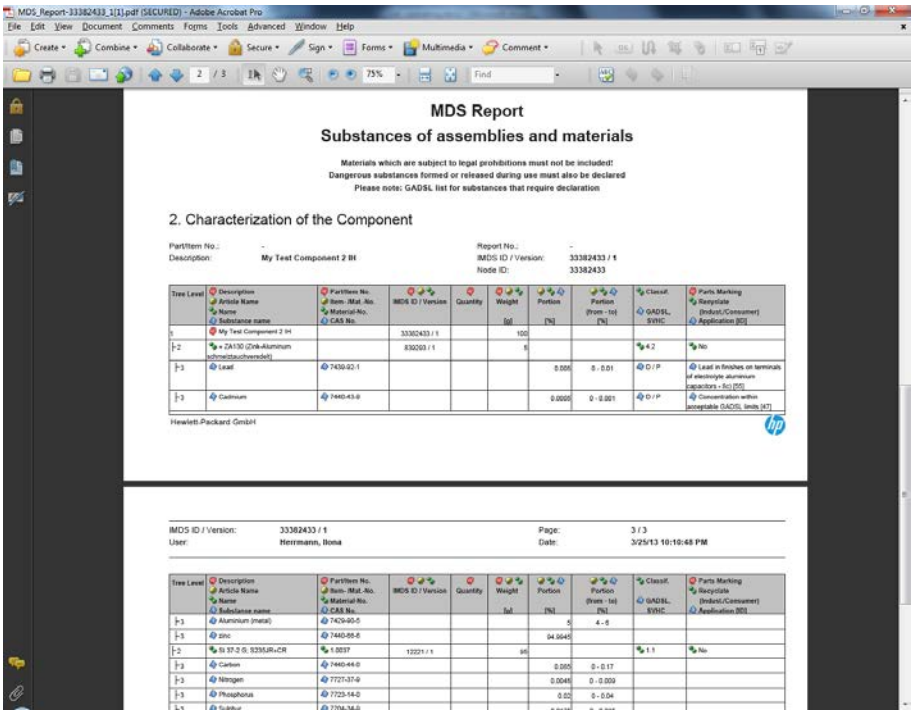
view). If an MDs Report is created from the Outbox, the user may choose which view the pdf file displays – either from the sender's perspective or the recipient's perpsective.



The recipient view provides only the information visible from the recipient perspective, i.e. on the Supplier and Recipient pages only the headers and not the detailed ingredients view. A message in red clarifies and explains the limitations of this view.

The following example illustrates the recipient's view. Exception: Section 3 "Characterization of the component" shows the creator's view (your view) of the decomposition. Therefore, senders may see confidential substances the receiver cannot see.




MDS_Report-33382433_1(1).pdf (SECURED) - Adobe Acrobat Pro
MDS Report
Substances of assemblies and materials
Materials which are subject to legal prohibitions must not be included!
Dangerous substances formed or released during use must also be declared
Please note: GADSL list for substances that require declaration
2. Characterization of the Component
Part/Item No.:
Description:
My Test Component 2 IH
Report No.:
IMDS ID / Version:
33382433 / 1
Node ID:
33382433
Hewlett-Packard GmbH
IMDS ID / Version:
33382433 / 1
User:
Herrmann, Bona
Page:
3 / 3
Date:
3/25/13 10:10:48 PM

5 IMDS – Outbox and Inbox

5.1 Outbox

The Outbox ( ) permits users to track and maintain status information for the MDSs sent to recipients, as well as owned MDS Requests.

The search parameters and the search result table are combined in one screen for each selectable type. This screen is divided into a top area and a bottom area. The top area is used to show the search parameters and the bottom area displays the search results table. The following table provides a description of the Search Parameters:

Field	Description
Sent MDSs	
Name	MDS name or description
Number	Item/material number – from your Ingredients page – NOT the Recipient Data page
MDS ID / Version	Limit the results to the Current Version or display All versions
Node ID	System Generated – This is the unique identifier for this version of this MDS. For the 0.01 version of the MDS, it will be the same as the ID. This is useful for reporting issues to IMDS Support, but is not generally available in search criteria or other selection fields, and is of limited use during normal operations.
Date Transmitted	Search by date range of transmission to recipient
Date Last Status Change	Search by date range of last status change
Combined / All	Find transmitted items in any status
Combined / Open MDS	Find transmitted and “Open” items (all but cancelled by sender and accepted)
Status: not yet browsed	Find those transmitted items the recipient has not viewed.
Status: browsed	Find transmitted items where the recipient has viewed but has not made a decision
Status: accepted	Find transmitted items where the recipient has accepted

Field	Description
Status: rejected	Find transmitted items the recipient has rejected
Status: modified	Find items returned to your company's control for editing/corrections
Status: cancelled by sender	Find items deleted by your company or deleted by the recipient
Only Forwarded	Limit your search to items which are forwarded copies
Org Unit	Find items sent to a specific Org Unit (the User's ID must be assigned to that Org Unit, or the User must be a Company Administrator)
Enable Search by Recipient	Check this box to look for items for/from a specific recipient
Recipient	List of recipients for whom to find results (this box is disabled unless the Enable Search by Recipient check box is selected)
Include all Org Units	Find items transmitted to the recipient companies regardless of Org Unit (the User's ID must be assigned to the Org Units, or the User must be a Company Administrator)
Own MDS Requests	
Type	Type of MDS – Component, Semi-Component or Material
Project	Project name/number to which the Request is assigned
Deadline date from – to	Initiates the search on deadline dates. If entered, "from" is the earliest searched, and "to" is the last date searched.
Status	Filter on the status of the request (new, sent, rejected, awaiting acceptance, completed). Only one status may be selected per search. Check the "open requests" box to return all requests that have not been closed or cancelled.
Enable Search by Recipient	Check this box to search by customer (=MDS Request Recipient).
Recipient	List of recipients for which results should be found (this box will be disabled unless the box Enable Search by Recipient is checked).
Requestor	Selects an MDS Recipient for whom to search for Requests

Field	Description
Assigned MDS / Name / Number	Find own Requests to which a certain MDS has been assigned – by MDS selection, name or number.

When selecting the Supplier / Recipients, a modal dialog pops up displaying the Company / Org.-Unit Search panel.

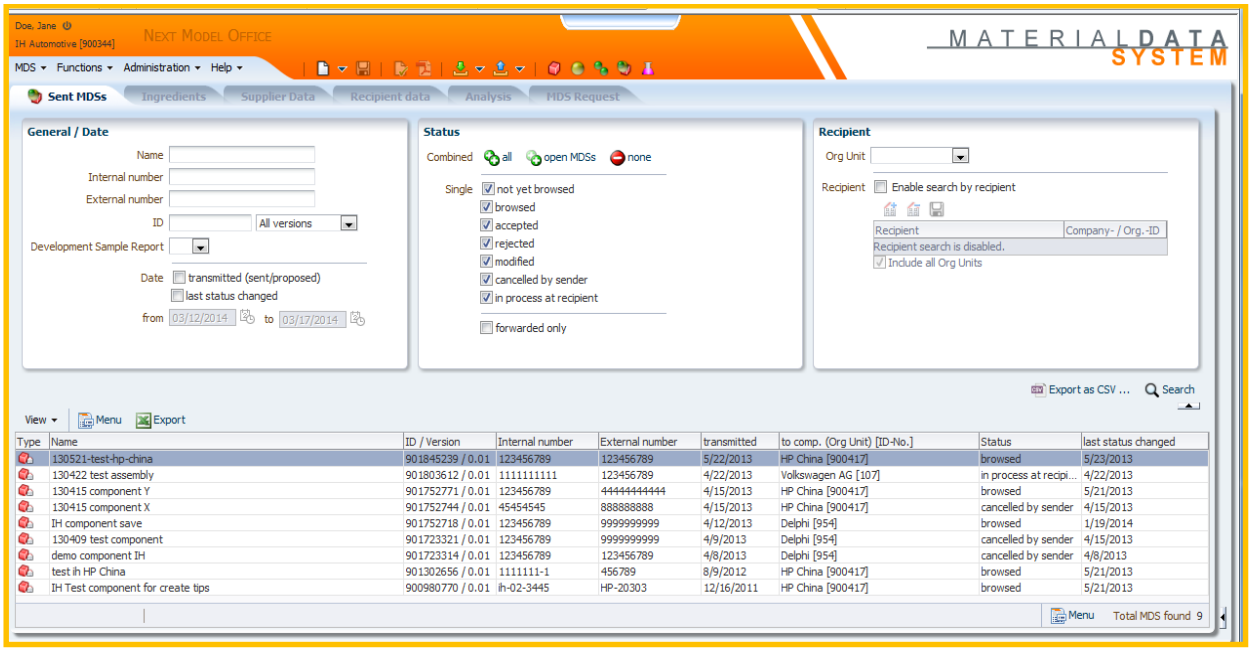

Doe, Jane
IH Automotive [900344]
NEXT MODEL OFFICE
MATERIALDATA SYSTEM
MDS Functions Administration Help
Sent MDSs
Ingredients
Supplier Data
Recipient data
Analysis
MDS Request
General / Date
Name
Internal number
External number
ID
All versions
Development Sample Report
Date
transmitted (sent/proposed)
last status changed
from 03/12/2014 to 03/17/2014
Status
Combined all open MDSs none
Single
not yet browsed
browsed
accepted
rejected
modified
cancelled by sender
in process at recipient
forwarded only
Recipient
Org Unit
Recipient
Enable search by recipient
Recipient
Company- / Org.-ID
Recipient search is disabled.
Include all Org Units
Export as CSV ...
Search
View
Menu
Export
Type Name ID / Version Internal number External number transmitted to comp. (Org Unit) [ID-No.] Status last status changed
130521-test-hp-china 901845239 / 0.01 123456789 123456789 5/22/2013 HP China [900417] browsed 5/23/2013
130422 test assembly 901803612 / 0.01 1111111111 123456789 4/22/2013 Volkswagen AG [107] in process at recipi... 4/22/2013
130415 component Y 901752771 / 0.01 123456789 44444444444 4/15/2013 HP China [900417] browsed 5/21/2013
130415 component X 901752744 / 0.01 45454545 888888888 4/15/2013 HP China [900417] cancelled by sender 4/15/2013
IH component save 901752718 / 0.01 123456789 9999999999 4/12/2013 Delphi [954] browsed 1/19/2014
130409 test component 901723321 / 0.01 123456789 9999999999 4/9/2013 Delphi [954] cancelled by sender 4/15/2013
demo component IH 901723314 / 0.01 123456789 123456789 4/8/2013 Delphi [954] cancelled by sender 4/8/2013
test ih HP China 901302656 / 0.01 1111111-1 456789 8/9/2012 HP China [900417] browsed 5/21/2013
IH Test component for create tips 900980770 / 0.01 ih-02-3445 HP-20303 12/16/2011 HP China [900417] browsed 5/21/2013
Menu
Total MDS found 9

Figure 13 – Outbox

The results can be exported to MS Excel using the Export command.

Additionally, columns in the display can be turned off and/or reordered by using options in the View menu.

With all these items, a double click displays the Ingredients tab of the submission.

5.2 Accepting / Rejecting in the Inbox

The Inbox ( ) shows all MDSs and, MDS Requests sent to the company. If Organization Units are used in a company, the User ID must have the Org Unit assigned in order to view it. The search

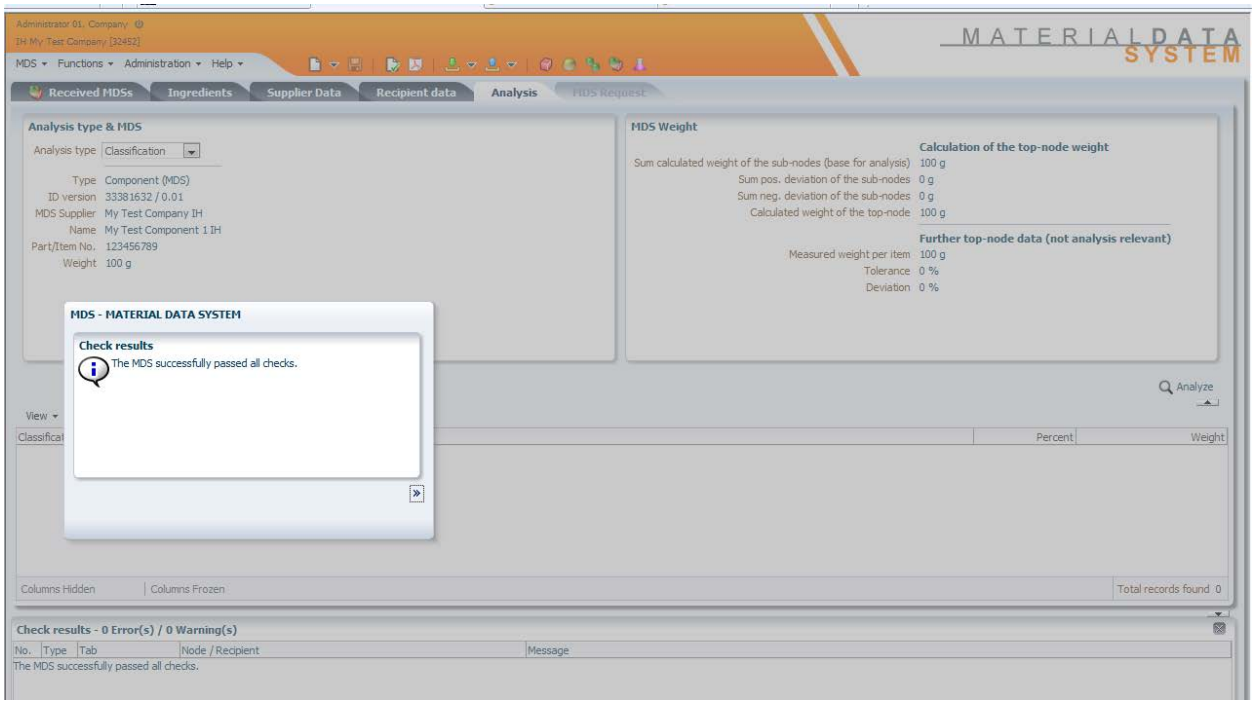
parameters are the same as for the Outbox, as are the columns in the display. What is different about the Inbox is the MDS must be viewed and accepted before it can be attached to one of the structures.

Begin by selecting the MDS or MDS Request to review by double clicking it. This will display the Ingredients/Details page.

The structure and all information can be explored and reviewed (see Operating with an MDS) according to the existing rules in the company. Also the information in the Recipient Data tab should be reviewed.

After viewing the submission, **Accept** and **Reject** are available in the MDS menu**.**

If the user selects **Check**, IMDS will run system checks to determine whether there are violations of any of the standard verification issues. The resulting screen will look similar to the following:



The user may either Accept or Reject the submission by clicking on the appropriate button

. Alternatively the MDS Menu provides the same options for accepting or rejecting.

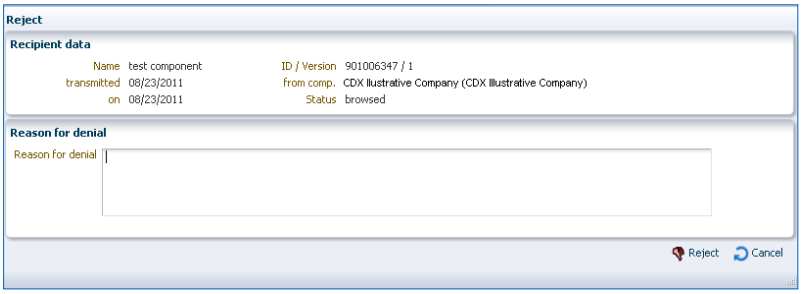
Accepting the MDS

If the MDS has passed all system checks and

is chosen, the status of the MDS will change to **accepted** and the MDS can appear in the search, and may now be attached to of the company's structures.

Rejecting the MDS

If **Reject** is chosen for the MDS, a reason for the rejection must be supplied. This should be self explanatory or else the supplier will feel free to call with any questions.



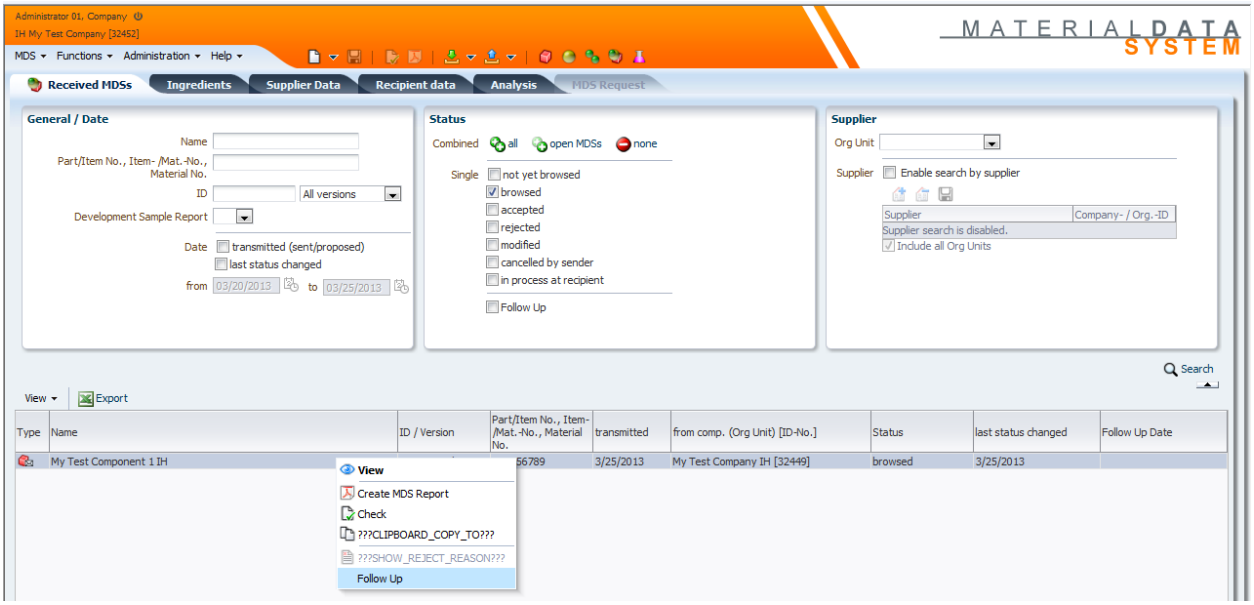
After a denial reason was entered,

must be clicked to change the status to **rejected**.

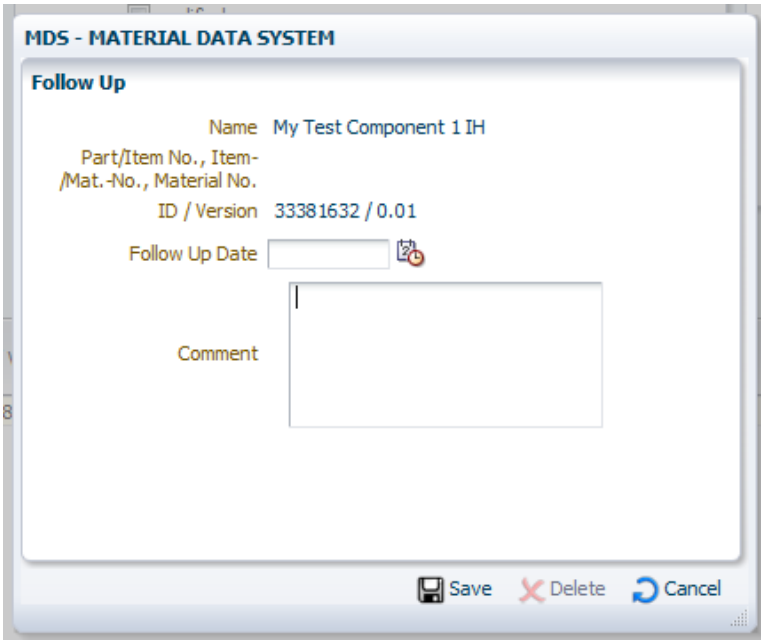
5.3 MDS Follow-up

IMDS provides an option to put received MDSs on a follow-up list. When MDSs are placed on this list, a due date for follow up must be assigned Please be aware that ALL users subscribed to follow-up notifications within the company receive the message “Due for Processing” upon login until the Follow Up is cancelled. Any user in the company can cancel the Follow-Up. Also, please note that follow-up items are NOT restricted by Org Unit – every subscribed user in the company receives these notifications, regardless of whether the notification originates in an Org Unit to which other subscribed users do not belong.

A Follow-up due date and associated information may be entered by choosing Follow-up from the right-click menu in the Inbox screen – the MDS in question must be right-clicked and Follow-up chosen:



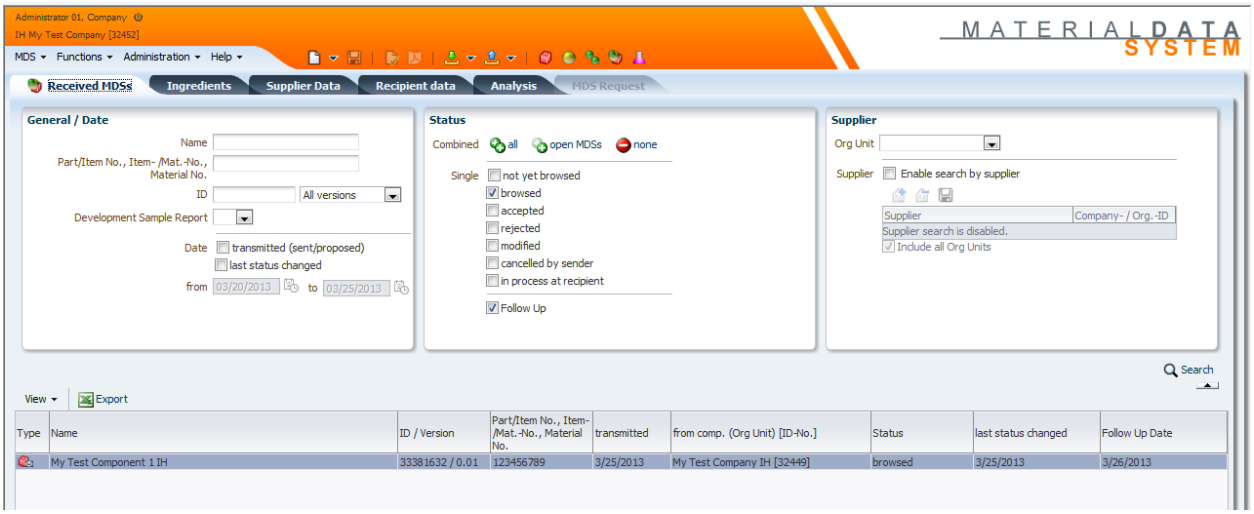
A window will appear similar to this:



In the Follow Up detail screen a Follow Up date (mm/dd/yyyy) must be provided, and a comment may be entered.

The **Save** button will save the item for Follow Up. The **Cancel** button discards the entered changes and the system returns to the previous window. An empty Follow Up date deletes the MDS from the Follow Up list. Entering a previous date is allowed, but the MDS is shown at the next log-on.

Selecting the “Follow Up” box in the Inbox will display all MDSs in a company which are marked for Follow Up.



A user may right-click upon a Follow-up notification item to edit a Follow-up. The Follow Up date and the comment can then be changed. With the “Delete” button the item can be removed from the Follow Up list. This does not delete the associated MDS. The “Cancel” button discards any changes, and the system re-displays the previous screen.

6 IMDS - Analysis

The Analysis function is a very powerful and valuable tool. It can determine whether an MDS has any substances that are on a restricted substance list, or to perform a “where used” for a specific basic substance or MDS (provided the basic substance or MDS has not been deleted).

One of the most common uses of the Analysis function is to check the compliance of an MDS or a group of MDSs with the GADSL or substance group.

The user may start the analysis for one MDS using the MDS/Module Search function in the “Functions”-Menu, from the toolbar ( ) or by pressing Ctrl+4. The selected MDS can be analyzed for all substances, materials or classifications by clicking the Analysis tab, and the output is presented by either of two selected measuring units (percentage [%] or weight [g]).

The user may select several MDSs for analysis. The selection can be either rule-based (using search options) or a non-standard selection from a user list of MDSs via MDS/Module search.

This list of MDSs can be analysed from the following perspectives:

Substance

Substance List

Substance Group

Classification

MDS/Module

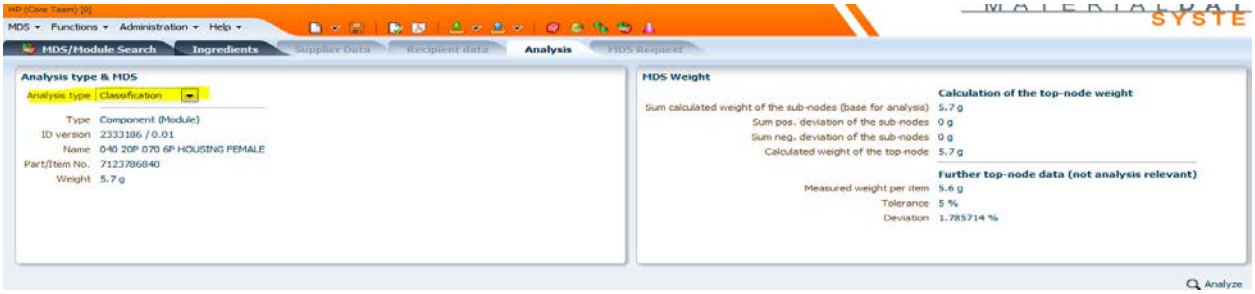
GADSL Categories / REACH-SVHC

Confidential Substances

6.1 Detailed MDS-Analysis

A user may analyse a single MDS or Module for materials, classifications and basic substances by weight or percentage, based on the calculated weight[1]. The user can choose the desired analysis type in the select box.

[1] Calculated weight is used because an MDS may reference MDSs without measured weights. Therefore, measured weight cannot be the basis for calculations.



6.1.1 Material

This option gives the user a breakdown by either weight or percentage of all the materials (by IMDS ID) in an MDS. If the same IMDS ID is used more than one place in the tree, the values are summed so each IMDS ID appears only once. However, if the same material is represented by multiple IDs, they will be listed multiple times. IMDS analyses by IMDS ID and not by name.

6.1.2 Classification

This option gives the user a breakdown by either weight or percentage of the material classifications used in an MDS. Different materials may have the same classification. The values are summed so each classification appears only once.

6.1.3 Basic Substances

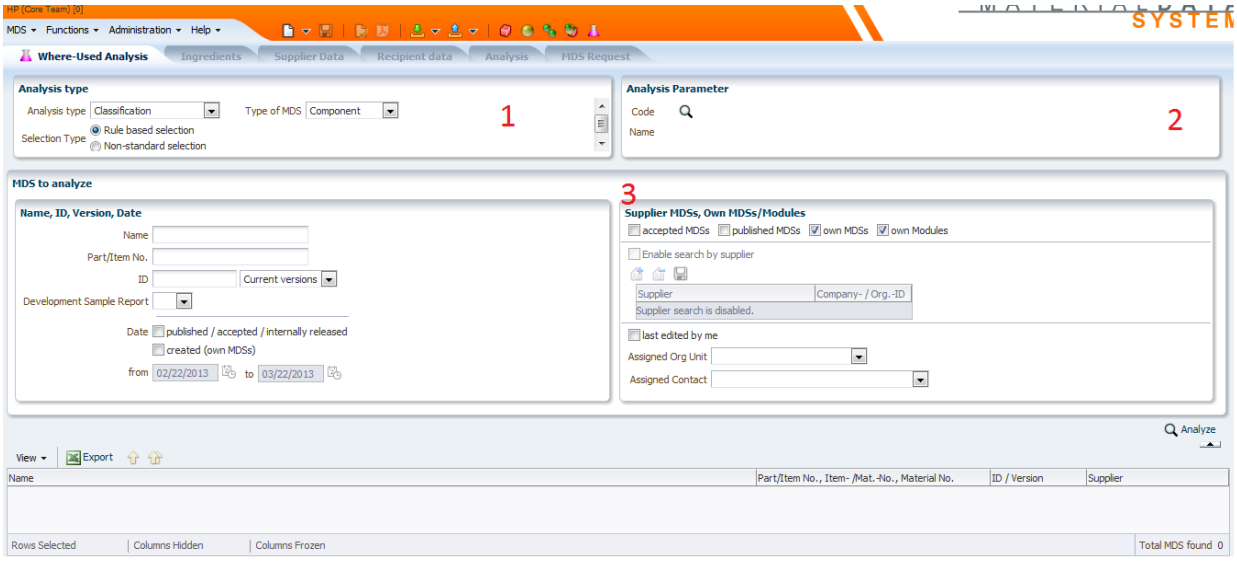
This option gives the user a breakdown by either weight or percentage of the basic substances used in an MDS. The analysis is performed using the index of the basic substance, so several substances in the same family (for example several lead substances) may appear in the analysis and each is summed separately).

6.2 Where-used

The “where used” feature of analysis is a powerful tool which can be applied to data maintenance as well as reporting.

The function can be found either in the toolbar ( ) or in the Functions menu.

After starting the menu the following screen will be visible:



In the top left tile (marked with “1” in the Screenshot), the user specifies the analysis type, the type of MDS and type of the selection.

In the top right tile (marked with “2”), the user specifies an analysis parameter. This tile is context sensitive, meaning the content is dependent upon the selections previously made in the Analysis type tile.

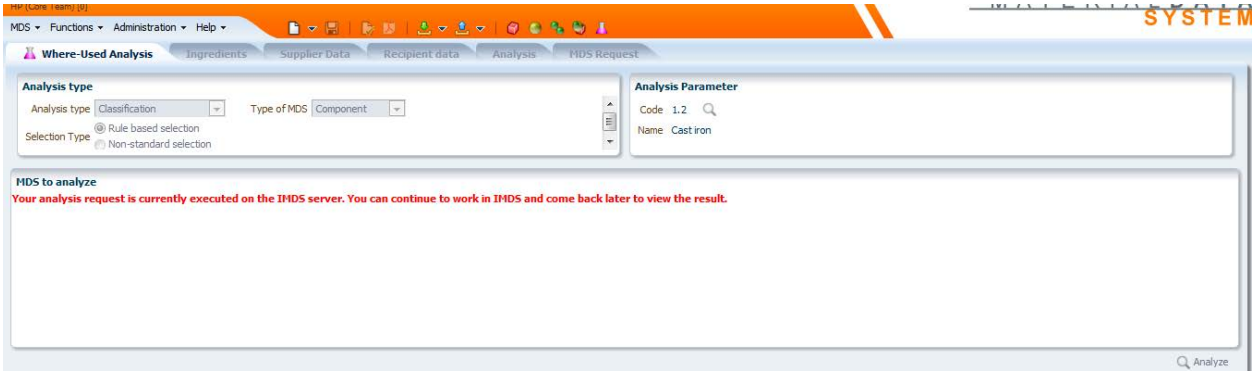
In the middle tile (marked with “3”), additional parameters can be specified. This view is also dependent upon the selections previously made in the first tile.

Analysis Types

Classification	Finds where selected material classifications are used
Module/MDS	Finds where a selected Module or MDS are attached
Basic Substance	Finds where a selected basic substance are attached
Basic Substance List	Finds where any substance in the list are attached
Group	Finds where any substance in the substance group is attached
GADSL Category / REACH-SVHC	Finds where substances with a specific GADSL Classification are used / where REACH-SVHC are used
Confidential Substances	Analysis for substances marked as confidential and became part of the GADSL-list
Application Code	Analysis for substances in materials which are marked with a certain application code

Users may choose between a rule-based selection or a detailed selection of MDSs using the radio button. All further analysis will check the set of MDSs based upon the previous selection. The user may select only one type of analysis at a time.

After initiation of an analysis request (clicking the **Analyze** button in the lower right) the user receives information about its processing status. The following screen is displayed:

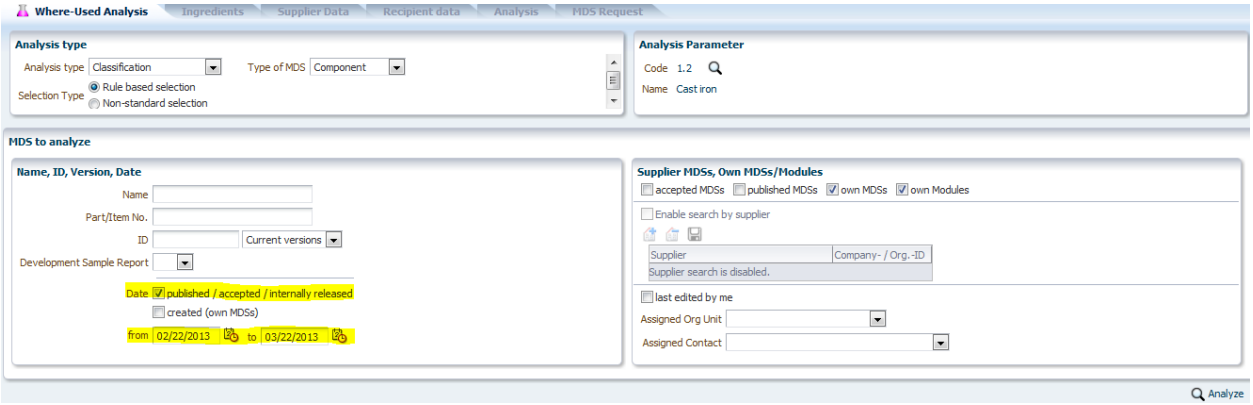


Clicking the analyze button schedules the analysis processing. Based upon the complexity of the analysis request and the current system load, analysis may take significant time (minutes for complex requests). The user can continue working elsewhere in IMDS and view the analysis result later. Only one analysis may be scheduled by a single user at one time. After IMDS user log off, the analysis result will no longer be available.

The analysis result lists in this section can always be exported into an .xls file.

6.2.1 Rule-Based Selection

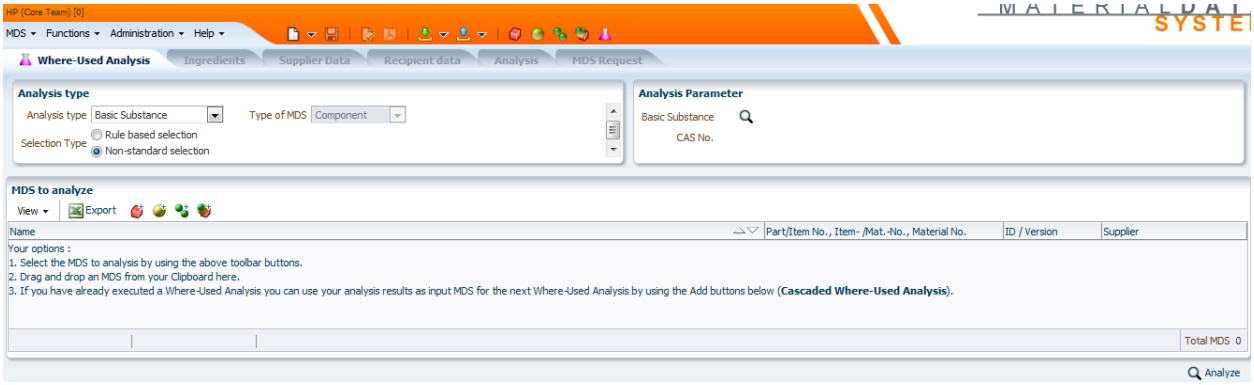
Users may select MDSs for analysis according to different criteria, e.g. all MDSs in a particular Organization Unit or created between certain dates. If the user's company has a very high quantity of complex datasheets, the analysis may exceed the time permitted. If this occurs, we suggest the user perform multiple searches with fewer results per search using the date range filters found in the middle tile.



Clicking the search button in the Analysis Parameter tile allows the user to specify several search filters which reduce the number of MDSs in the final result.

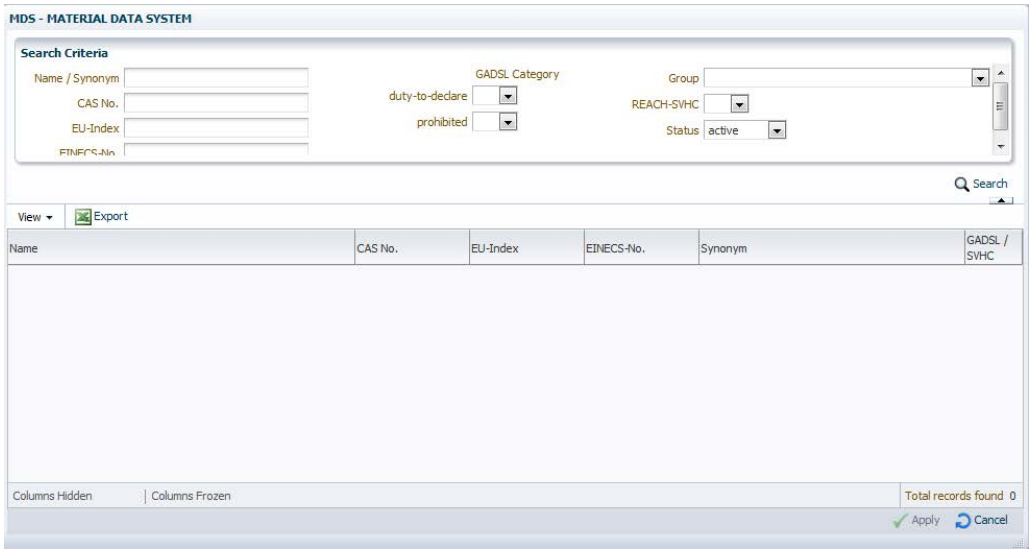
6.2.2 Non-standard Selection

Should the user desire to search a few items, the user may create a list of MDSs to analyze through this option. Using the **Add** buttons , the user may include a Component, Semi component Material or MDS to the set of items for analysis. A where-used Analysis differs from a detailed MDS analysis because where-used allows the user to analyze a group of MDSs, while Detailed MDS analysis allows the user to analyze one MDS at a time.

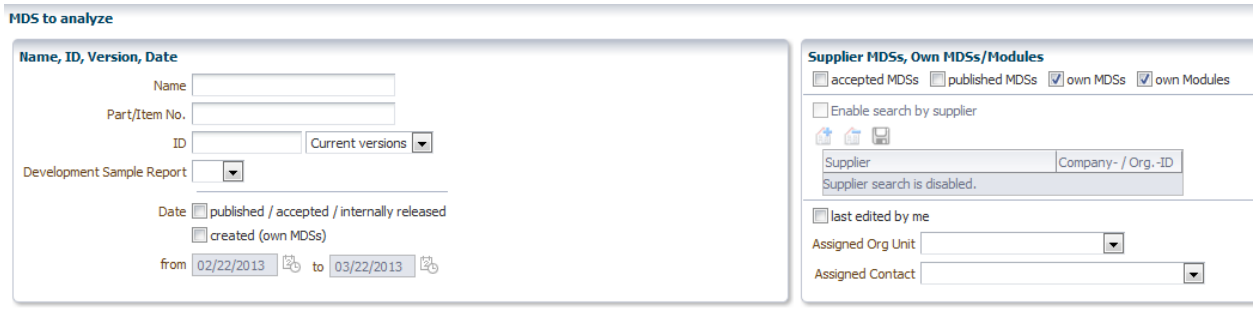


6.2.3 Specific where-used Analysis

The user may select a basic substance using the **Search** button which will bring up the substance search screen. This option is useful when the user must resubmit due to deleted substances, as this function will identify where materials with deleted substances exist.



The search can be limited using filters found in the middle tile. After selecting the substance and appropriate filters, the user clicks the **Apply** button.

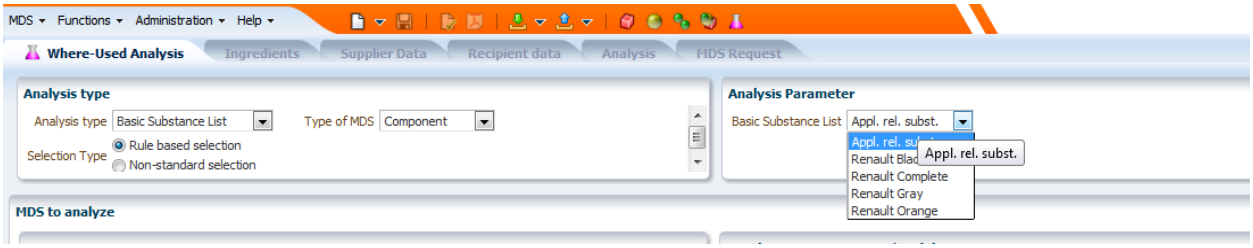


All MDSs which contain the specified substance are displayed In the results. The User can proceed to a Detailed MDS-Analysis by **double clicking** the selected result in the bottom tile. In

the Detailed Analysis the MDS can be checked for all substances, materials or classifications by selecting the measuring unit (percentage [%] or weight [g]).

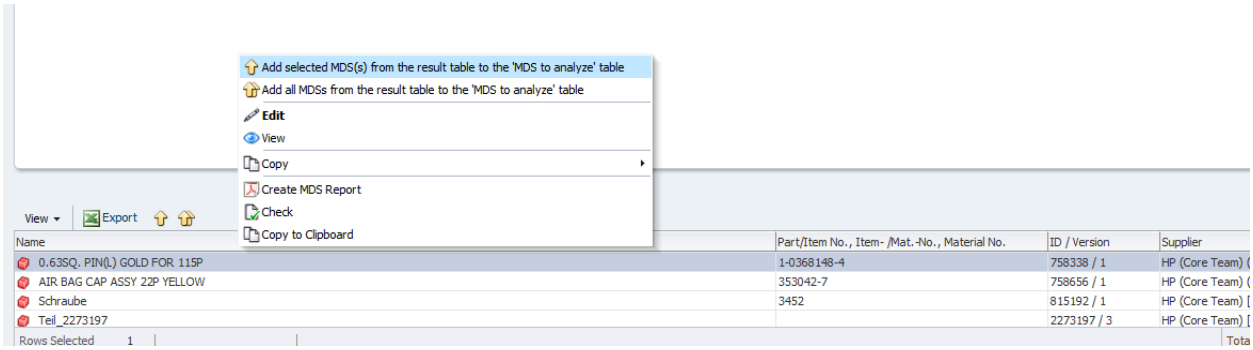
6.2.4 Substance List where-used Analysis

The user may search for substances on a certain list. Currently available selections include substances requiring an application code and substances on the Renault lists.



The user can use the options in the middle tile to filter the search result using a time period or specifying the origin for the MDSs.

The analysis is started for material datasheets containing substances on the selected substance list by clicking the **Analyze** button.



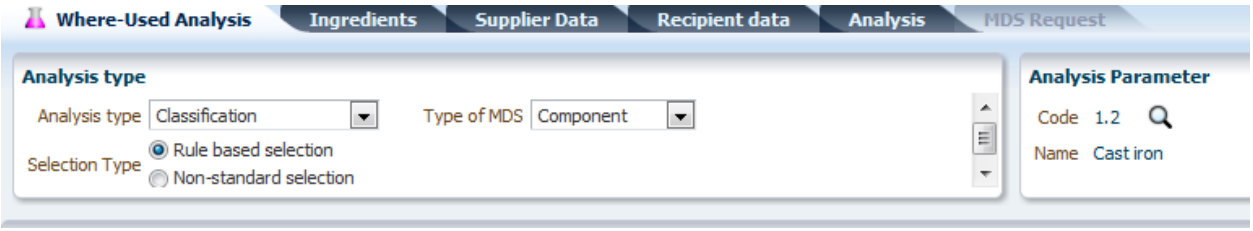
A **right click** on a selected MDS displays options as shown in the screenshot above. The result list shows the substances contained in the selected MDS which are part of the selected substance list.

6.2.5 Substance Group where-used Analysis

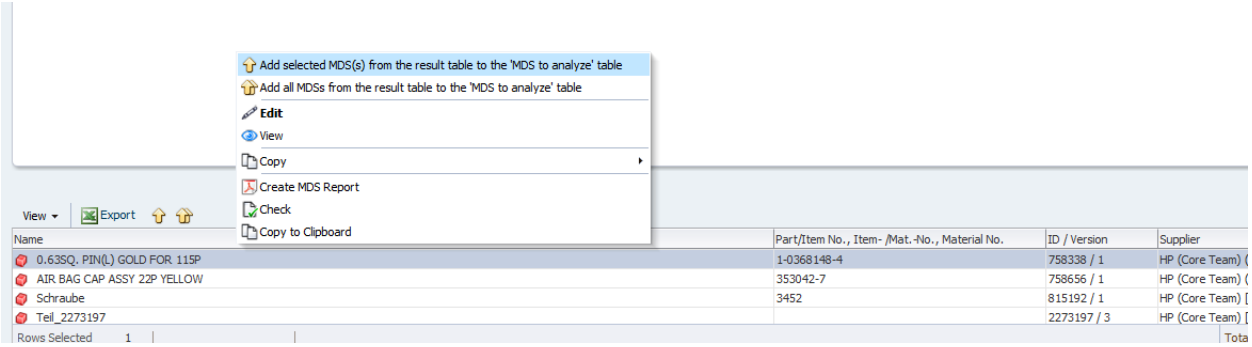
The user may select a substance group for analysis. In the second tile, the basic substance group may be chosen. Filter options may be chosen in the middle tile. Clicking the **Analyze** button starts the analysis, and the result list shows all material datasheets which contain substances from the selected group.

6.2.6 Classification where-used analysis

The user may select a classification for analysis. In the second tile, the code may be chosen with a click on the search button. Filter options may be chosen in the middle tile. After clicking the **Analyze** button, the analysis is started and all the material datasheets will be listed that contain material of this classification.



A **right click** on the selected MDS gives the user options as shown in the screenshot below.



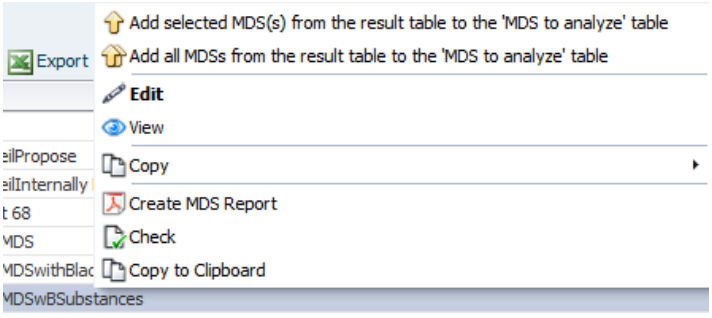
6.2.7 MDS/Module where-used Analysis

The user may select an MDS or module to analyze where this MDS or Module is used. In the second and middle tile, further filters may be entered. After clicking **Analysis,** all the material datasheets which contain the selected module/MDS are displayed.

6.2.8 GADSL / REACH-SVHC Classification where-used Analysis

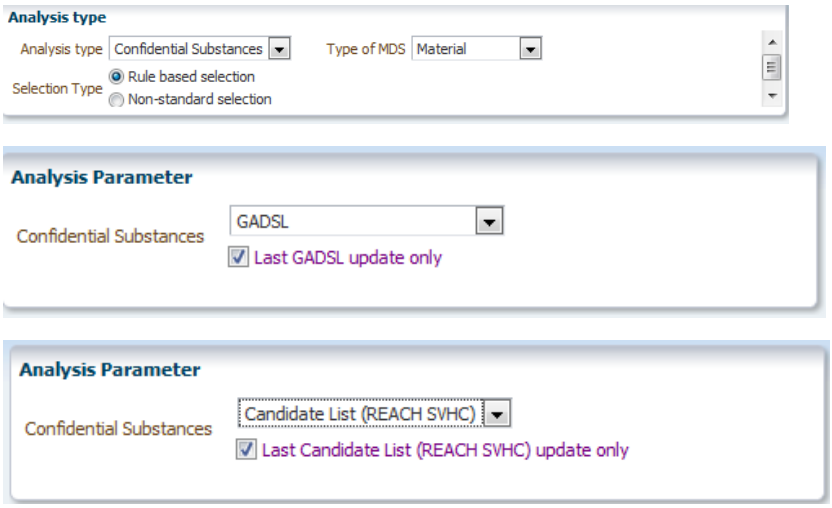
The user may analyse for substances contained in the MDS which are part of the GADSL-list and require declaration, or are forbidden, or both. The analysis can be conducted for REACH-SVHC. Based upon the type of MDS to be analyzed, the middle tile adjusts the displayed options to provide appropriate filters. After clicking the **Analyse** button, the analysis is started for MDSs which match the selection criteria.

A double click shows all the substances in the MDS according to the selection (forbidden, requires declaration) and if possible, lets the user edit the MDS. A right click on the highlighted MDS shows the user several options, as shown below.



6.2.9 Confidential Substance where-used analysis

Periodically, there are changes to the GADSL substance list and the REACH-SVHC candidate list. While a user may not mark a substance with a flag D or P confidential, a substance could be marked confidential and then be added to these lists later. When this occurs, the user needs to know. This is the purpose of this analysis type. The user can also analyze MDSs for changes resulting from the last GADSL / REACH SVHC update only.



6.2.10 Application Code where-used analysis

This analysis allows the user to find all MDSs with a special Application Code (e.g. Lead in Bearing Shells) within a group of MDSs. The concentration of the application-relevant Basic Substance (percentage value) can also be specified. All MDSs containing the selected Application Code and a concentration of the application-relevant substance greater than the value entered will be displayed.

7 IMDS Security

One of the car manufacturers' basic requirements is the ability to view and analyse all data of a material datasheet (MDS) sent to them. It is important that a maximum amount of information is displayed and, at the same time, provide the required data security in order to protect the suppliers. The data needs to be available in an on-line system as well as for the "data download" interface to off-line systems. In order to protect the material datasheet from unauthorized access, data access is limited within the system and the system itself is protected from unauthorized infiltration.

The following section describes the system's protection from external tampering and the mechanisms within the application which guarantee authorised data access only.

7.1 Physical Security

IMDS computers are kept in the HP's own Service Management Centre (SMC). The HP SMC ensures the servers' physical safety and provides the appropriate infrastructure (network availability, protection against system failure, etc.). Only authorised persons (operating and system administrators) have access to these machines, making physical manipulation or impairment of the operating system extremely difficult and unlikely.

7.2 Operating System Security

The IMDS system uses the UNIX operating system. Only HP administrators are allowed to access at an operating system level. HP standard procedures guarantee protection against external attempts to gain access to the system.

7.3 Database Security

The IMDS system uses an Oracle database. Access to this database is only allowed to system and database administrators. All persons are subject to data secrecy as per §5 BDSG (German Data Privacy Act).

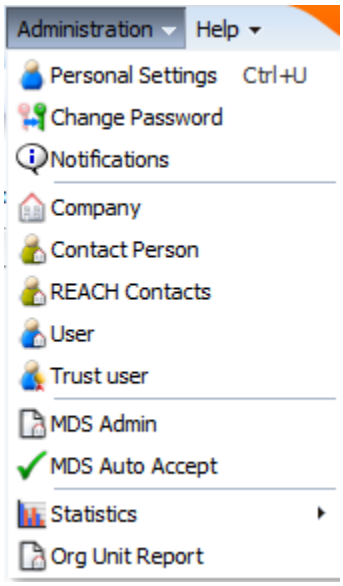
7.4 Application Security

Companies in IMDS have to register their users with the system. The users get passwords which need to be changed every 90 days or after a system password reset. New passwords must be different from the previous one and contain between 8 and 20 characters (capital and lower cases) and include at least one numeric character. Passwords are case sensitive and are limited to ISO 8859-1 characters.

As a base rule, access to IMDS data resources is allowed for authorized users identified by unique user names and passwords. Access to specific web areas and/or data items is granted depending on the user's data access profile and the ownership of the data item. Only users with a specific profile are allowed to execute certain actions on certain data in the application (see User Profiles).

8 Administration Menu

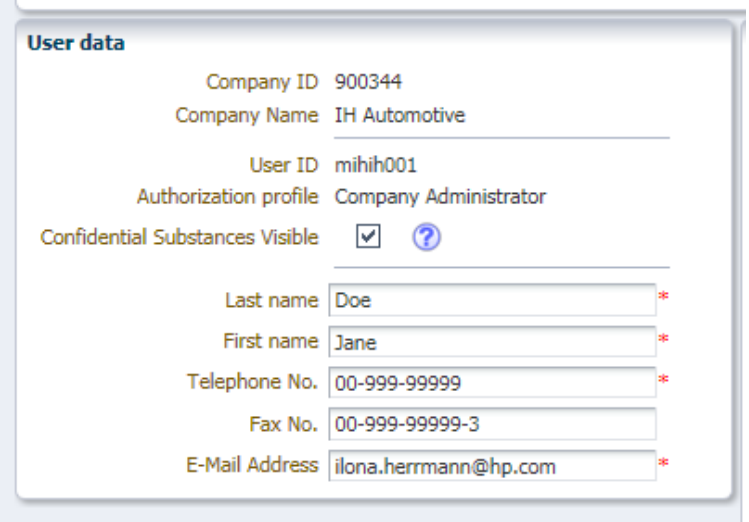
The Administration Menu contains functions that concern User and IMDS Company Administration as shown in the following figure. Some of the menu items are only visible for Company Administrators.



8.1 Personal Settings

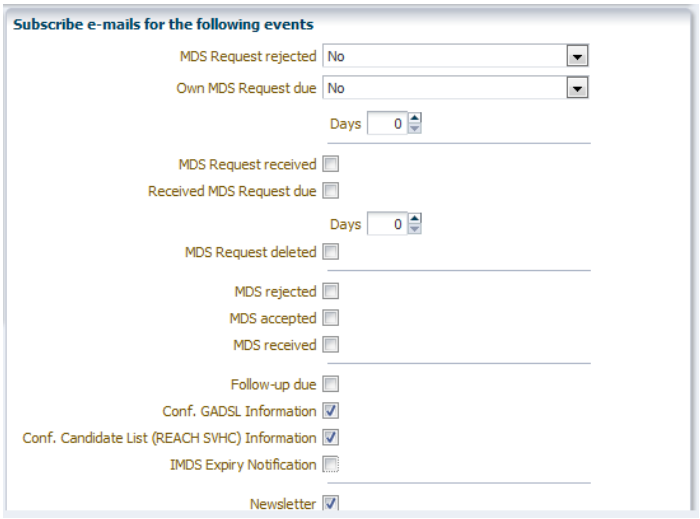
It is important to maintain the contact information in IMDS. Every user can do this through the Administration > Personal Settings option. Personal Settings also provides options to request IMDS notification via e-mail when certain events occur.

The user contact information is displayed as shown in the following image. To preserve privacy, all user information has been removed:



It is important the Telephone and Fax numbers include all country dialing codes, as IMDS is a global system, and users in another country may not know your country code. The attribute "Confidential Substances visible" can be set by a Company Administrator for users of the own company under Administration >> User. Here, in the Personal Settings, the field is Read-only.

The right side requests subscriptions to email notification alerts for specific event types.



Select the checkbox associated with the following events to receive the specified emails:

Event	Notification type
MDS Request rejected	Select: when any request created within the company is rejected or when any request created by this user is rejected.

Own MDS Request due	Select: when any request created within the company is due or when any Request created by this user is due. Select: the number days before the due date to be notified.
MDS Request Received	When the company receives an MDS Request.
Received MDS Request due	When a request received within the company is due. Select the number of days before the due date to be notified.
MDS Request deleted	When an MDS Request is deleted
MDS Rejected	When a sent or proposed MDS from user company is rejected.
MDS Accepted	When a sent or proposed MDS from user company is accepted.
MDS Received	When an MDS is received within the company.
Follow-up due	When an MDS is due for Follow-up
Conf. GADSL Information	When confidential substances have become part of the GADSL
Conf. Candidate List (REACH SVHC) Information	When confidential substances have become REACH SVHC
IMDS Expiry Notification (Company Administrators):	When a user account is at the “Valid until” date, and is about to expire.
Newsletter	When a new release of the periodic IMDS newsletter containing important user information is available.

8.2 Password Change

Every IMDS user can change his/her current password from this menu selection.

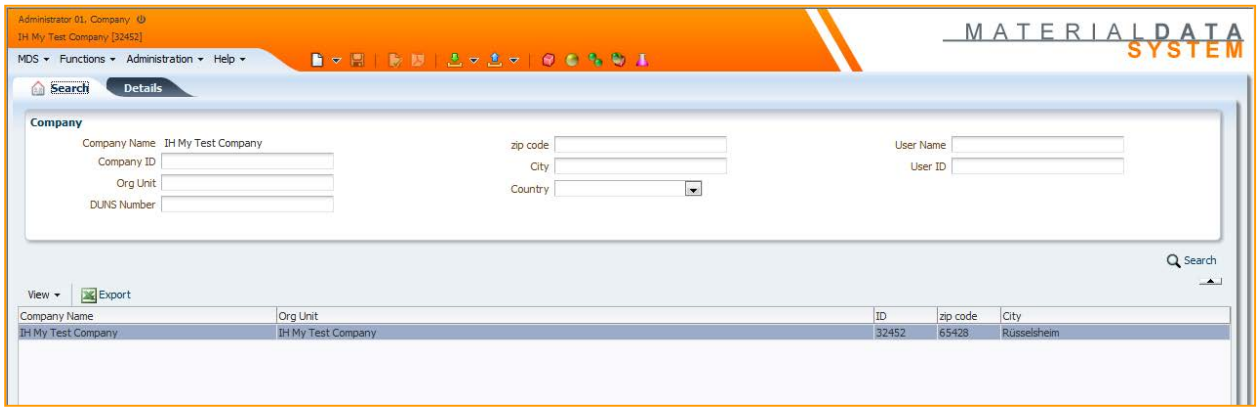
8.3 Notification

This menu item will display current messages from the system. Select the appropriate button to either receive the notification at next log on or to confirm the announcement was read. The users choices are saved when the “OK”-button is pressed.

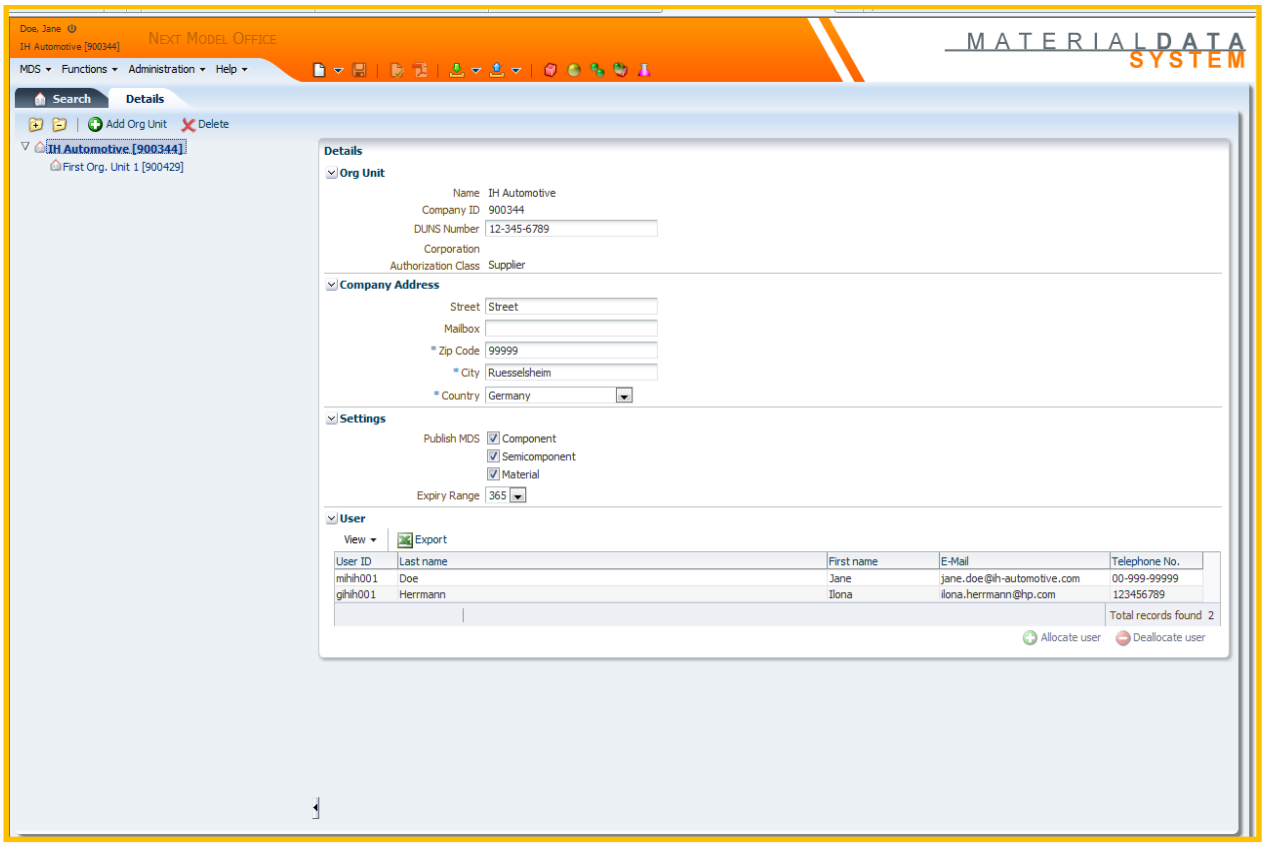
8.4 Company

8.4.1 Changing Company information

This menu item permits display and editing of company information such as name, address, DUNS number, and Org Units. Company Administrators are the only type of User with access to this menu item. Company Administrators can and are responsible to maintain all company administrative information. Org Units are optional, and are explained in the next section. The company screen will look similar to the following:



Highlight the company whose information you wish to edit/view. Then either the Edit/View button can be clicked or Edit be chosen after right-clicking. This leads to the Details tab. On the right in the Details Tab is the company registration information. Company ID is a unique system-assigned number and cannot be changed except via for-fee company reorganization.



For security reasons, the **Company Name** cannot be changed directly by any user, including Company Administrators. However, Company Administrators are the only persons authorized to request a company name change. There is no fee associated with a company name change, unless the change includes moving IMDS information to or from the company registration as part of a re-organization. The process for a simple company name change is as follows:

1. Verify any Org Units within the company either have names which reflect the new company name or are company-name neutral.
2. If possible, ensure all email address domains match the proposed company name, and not the old company name.
3. Verify the proposed company name is not the same or very similar to any existing company names.
4. New company names may use only Standard English characters. Verify there are no non-English characters such as á, ñ, ü, etc.
5. Verify the proposed name is less than 80 characters in length.
6. From the email address registered in IMDS, a Company Administrator may send a written request to an IMDS Service Desk, clearly requesting a simple company name change and stating the IMDS Company ID, existing company name, and requested company name.

In most cases, company name change requests meeting these criteria are processed within 1-2 business days.

The Company "Expiry Range" specifies the default time newly created user accounts are valid. User accounts created after setting this field will have an initial “Valid Until” date the number of days specified after creation. Valid options are currently 90, 180, 365 or 730 days.

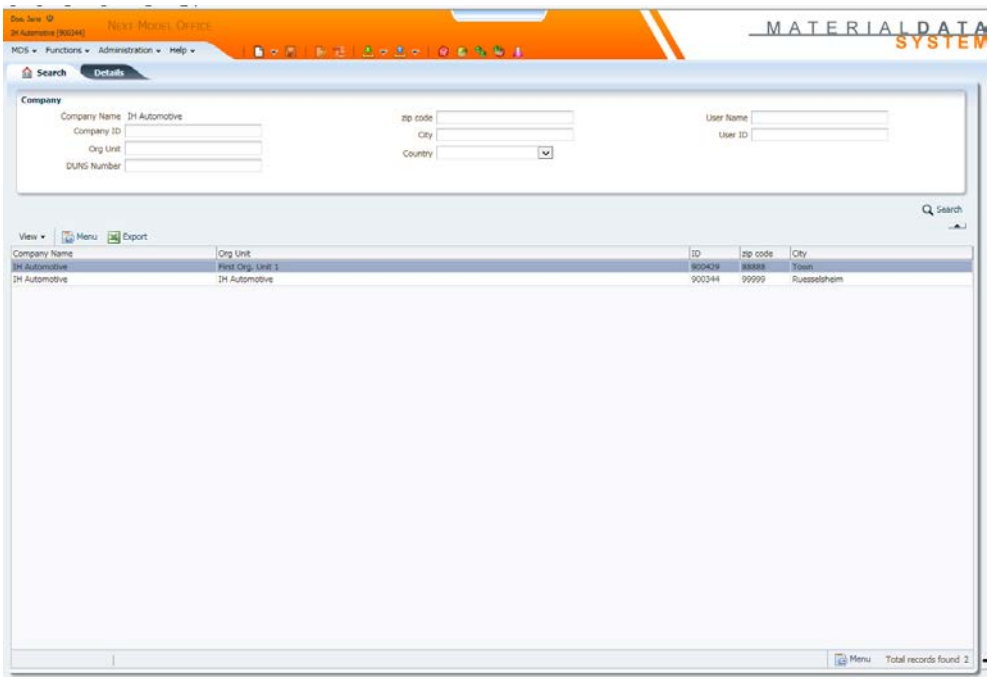
Near the screen bottom is an authorized user list with contact information for the IMDS Company.

To help with user account management, the user list can be exported. The exported list contains information such as the user last login date. For security purposes, we strongly recommend Company Administrators inactivate users who do not need access to the system. As noted above, users can change their own e-mail address. If a Company Administrator does not deactivate the account, these users can change their email address and retain access to company IMDS data even after leaving the company. For instructions on how to inactivate a user, see Administration – User.

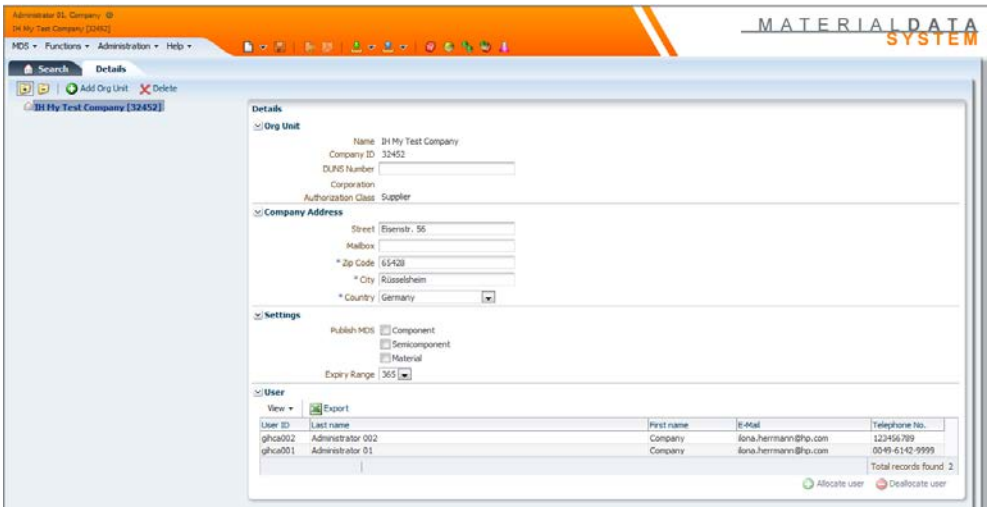
8.4.2 Adding Organization Units

Organization Units (Org Units) provide a means by which company information can be organized and separated. Org Units can follow any organizational structure you find useful. Typical scenarios include geographic Org Units (region, country, state, plant) and functional Org Units (Electronics, Fluidics, Structural).

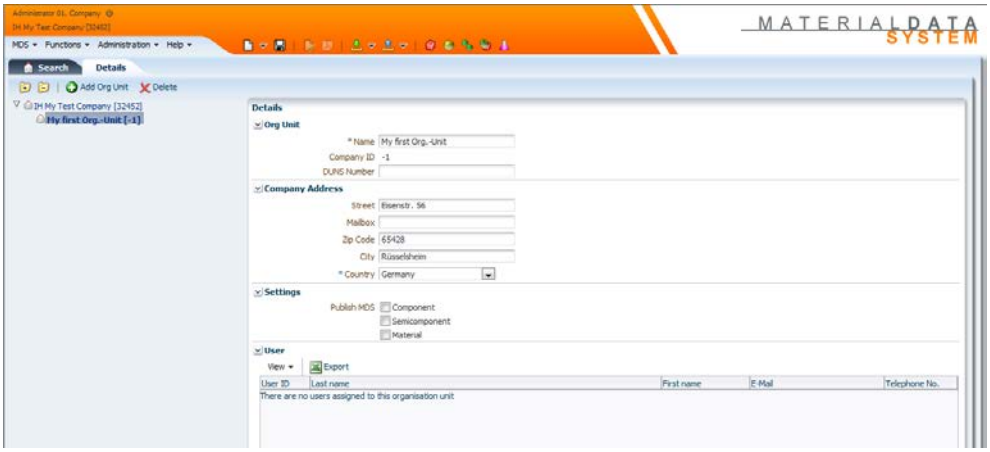
Org.-Units are added using **Administration >> Company**.



The details for your company / a certain Org.-Unit can be edited by right-clicking the respective entry in the result screen, where all Org.-Units are listed. Alternatively, the Menu option can be chosen (top left of the result list, bottom right under the result list).



On the left side of the screen, the company structure is displayed. Org Units can be added by clicking on “Add Org.Unit” above the structure. If **Add Org Unit** is chosen, the right side of the screen changes.



Provide a meaningful name for the Org Unit, Org.-Unit details and click on the disk icon to save your entries to finish creation.

Each Org Unit receives a unique ID similar to a Company ID, and this ID can be used to received MDSs from Suppliers and send MDSs to customers in much the same fashion as they are received and sent from a company. However, until users are assigned to an Org Unit, any MDSs received would not be visible to anyone, so IMDS will not permit receiving an MDS into an Org Unit until at least one user is assigned to the Org Unit. Instructions on adding Users to Org Unit appear in the section titled Administration – User.

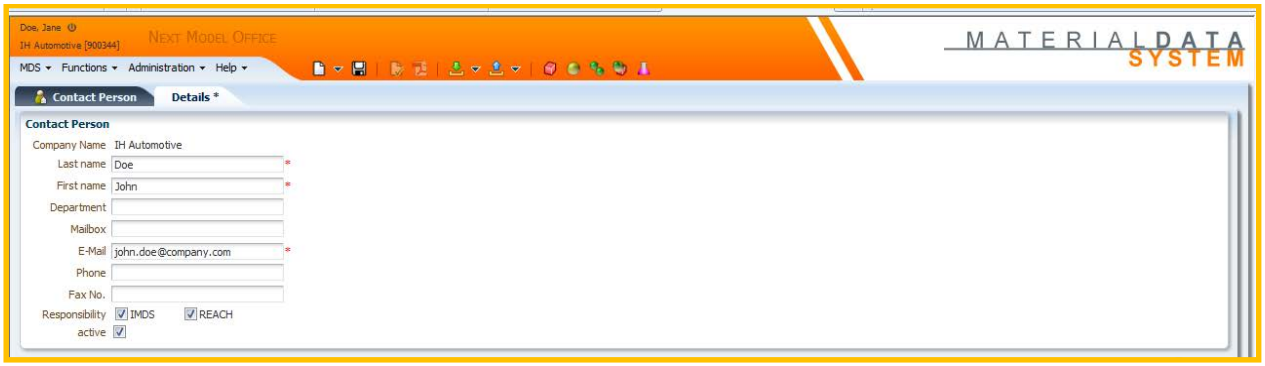
8.4.3 Deleting Organization Units

To delete an Organization Unit from the Company screen right-click upon the Org Unit to delete, then select **Delete** from the resulting menu.

Note: if the Delete option does not appear, the structure must first be saved. The Delete option should then appear.

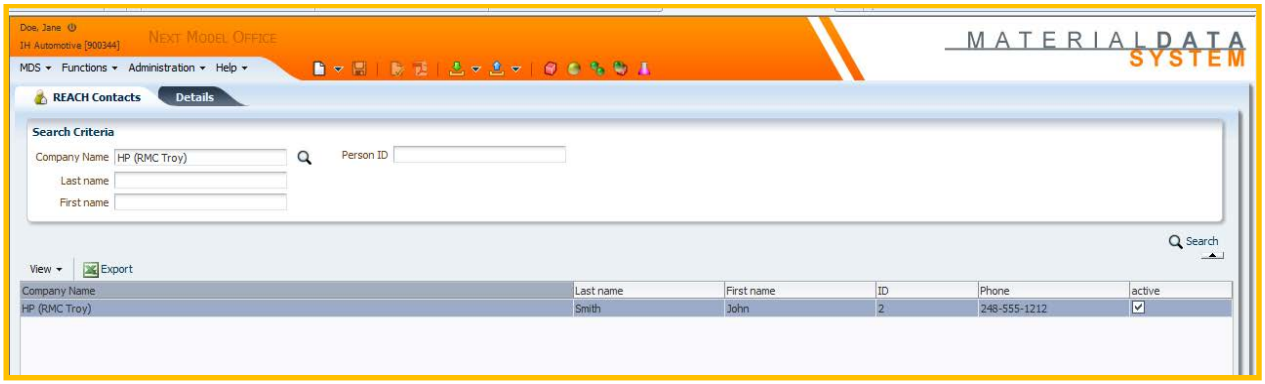
8.5 Contact Person / REACH contacts

If persons are entered as a **Contact Person**, they appear to other companies in the contact list on the MDS Supplier Data Tab.

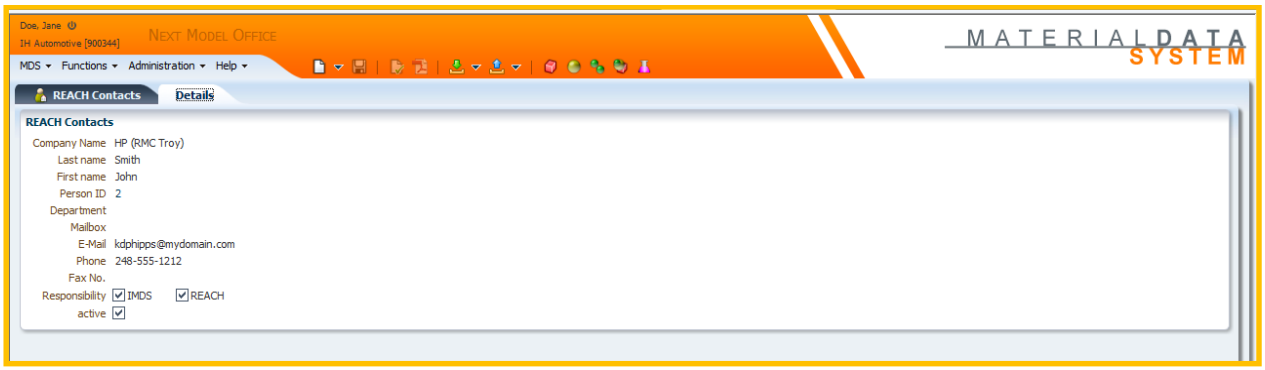


Field	Description
Contact Person	Check the box if this person should appear as a contact person on the Supplier Data Screen.
REACH Contact	Check this box if this person should be listed as a REACH contact.
active	shows if the contact person is active

If they are entered as a **REACH Contact,** they appear to other companies in a search of the company REACH contacts. We recommend at least one user can be identified as a REACH contact.



Double-clicking leads to the details tab in which the details for this REACH contact can be viewed:



8.6 User

The User administration option is only available to users with a Company Administrator profile. To ensure adequate backup, we strongly advise a minimum of two (2) Company Administrators per company. It is the responsibility of the Company Administrator to manage users and profiles, including password resets.

8.6.1 User Profiles

There are five (5) types of explicit User profiles in IMDS.

Company Administrator

Company Administrators have the greatest responsibility and hold the most elevated privileges of all IMDS User types. In all companies except the very largest, the Company Administrators should be the most trusted people who are the most familiar and work the most often in IMDS. These individuals have significant responsibility, authority and capabilities, both within IMDS and in what they may request from the IMDS Support Centers.

Company Administrators may perform any action available to any other IMDS user profile. In addition, it is their responsibility to create and maintain User IDs and contact persons, assign

users to Org Units, perform password resets, and maintain the accuracy of the User and Contact Person e-mail and phone contact information. Company Administrators are company representatives and are listed by name to other IMDS companies. They have all the privileges to administer the MDSs, Org Units, users and contact persons for the company. They may request company name changes and additional for-cost services from the Support Centers, and can provide any IMDS user from any company access to the company's IMDS information.

To ensure adequate coverage and provide backup, we strongly recommended each IMDS company have a minimum of two (2) Company Administrators. The IMDS Service Centers are limited in account management to assisting Company Administrators. The Service Centers are not permitted to add or restore user accounts while a Company Administrator is with the company, and are only permitted to assign a new Company Administrator when all existing administrators have permanently left the company and when authorized in writing, and signed by a senior company officer. This can create major challenges when a company is unable to achieve PPAP completion pending an IMDS submission, so sufficient Company Administrators to perform the required tasks are recommended in the strongest possible terms.

User (Publish) Profile

User(Publish) users do not have administrative rights and cannot "Certify" for the company. Users with a User (publish) Profile may create, send, propose, and publish material datasheets. They may review and accept or reject datasheets sent to the company (provided the company is not an AI user). They cannot perform general administration tasks, yet have the capability to maintain their own name, phone and email through the **Administration >> Personal Settings** option from the main menu.

User (Certification) Profile

User (Certification) users do not have administration rights, but can perform "Certification" for the company if the company is a supplier to an OEM that requires annual certification. User (Certification) may create, send and propose material datasheets. They can review and accept or reject datasheets sent to the company (provided the company is not an AI user). They cannot perform general administration tasks, yet have the capability to maintain their own name, phone number and email address through the **Settings** option from the main menu.

Users with User Profile

Users do not have any administrative rights and cannot "Certify" or "Publish". Users with a User Profile create and send or propose material datasheets. They review and accept or reject

datasheets sent to the company (provided the company is not an AI user). They cannot perform general administration tasks, yet have the capability to maintain their own name, phone number and email address through the **Settings** option from the main menu.

Read-Only Users

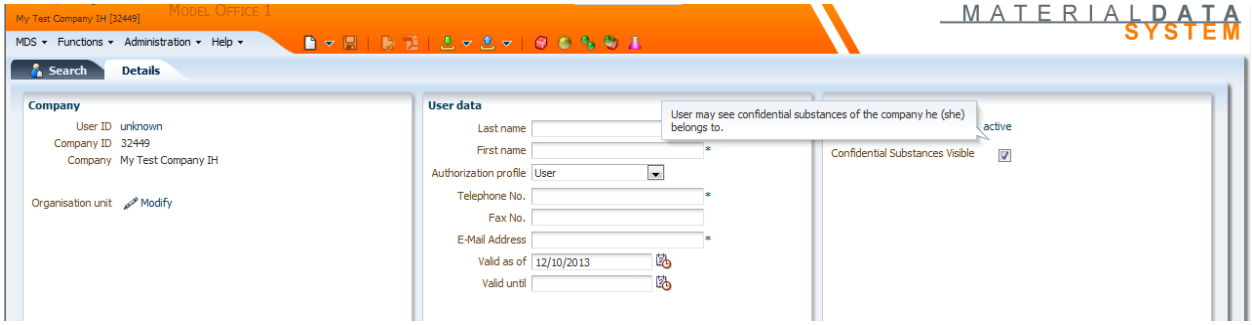
This profile can be assigned to special users by the Company Administrator. With this profile the user can view, but not change, datasheets created by their own company, view published data, and view datasheets received and accepted by their company. Additionally each user has the capability to update their own phone number and email address.

Public Users

The public users do not need to be set up explicitly and have no system rights. They can only view the public areas ("IMDS Information Pages") of the IMDS site. They cannot access the actual IMDS.

8.6.2 Create a User

Each user must have their own ID, in their own name to use the system. To create a user, click on the **Create a User** button from the Search User screen. A window similar to the following will appear.

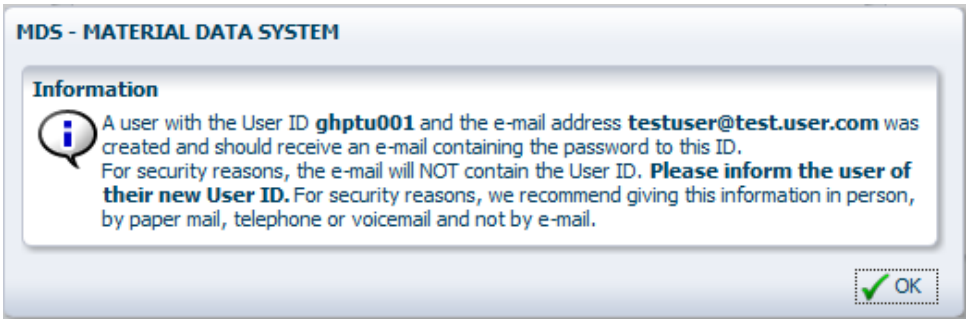


The appropriate information as shown in the following table must be provided:

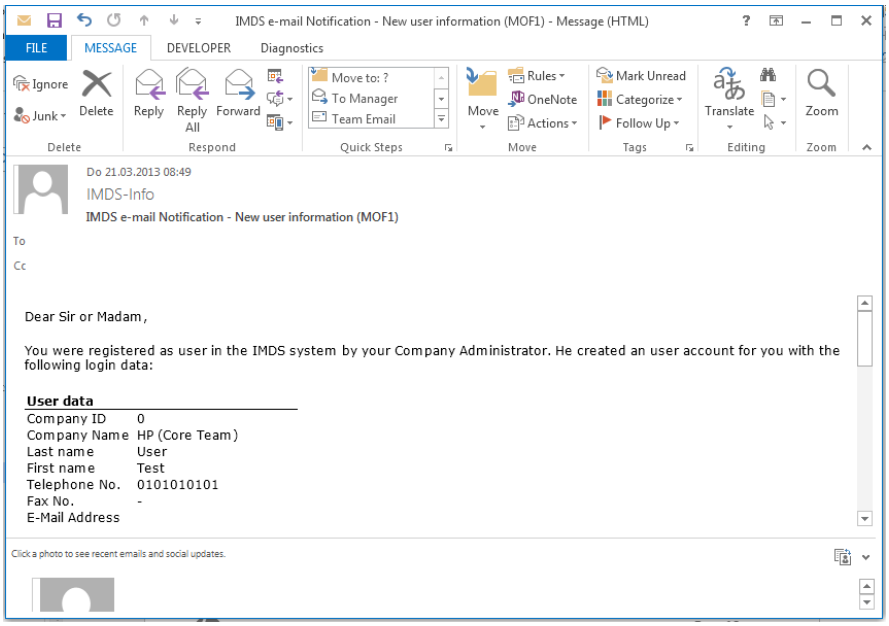
Field	Description
User ID	System Generated – not assigned yet
Company-ID	System Generated
Company	Own company's name and read-only
Organisation Unit	Organization Unit assigned to ID

Field	Description
Last Name	The user's Last Name (required)
First Name	The user's First Name (required)
Authorization Profile	Use the pull down to select the appropriate profile (required).
Telephone No.	The User's telephone number including all country and dialing codes (required)
Fax No.	The User's fax number including all country and dialing codes (optional)
E-mail Address	The user's e-mail address (required)
Valid as of:	The start date when the user can use the ID.
Valid until:	The last date that the user can use the ID to access the system.
Confidential substances visible	For Company Administrators: Default is OFF, the box must be ticked that the user can see confidential substances in the company's own Material MDSs For Users: the field is available but read-only in the Administration >> Personal Settings screen

When complete, the save ( ) icon must be clicked, and the User ID will be created.


MDS - MATERIAL DATA SYSTEM
Information
A user with the User ID ghptu001 and the e-mail address testuser@test.user.com was created and should receive an e-mail containing the password to this ID.
For security reasons, the e-mail will NOT contain the User ID. Please inform the user of their new User ID. For security reasons, we recommend giving this information in person, by paper mail, telephone or voicemail and not by e-mail.
OK

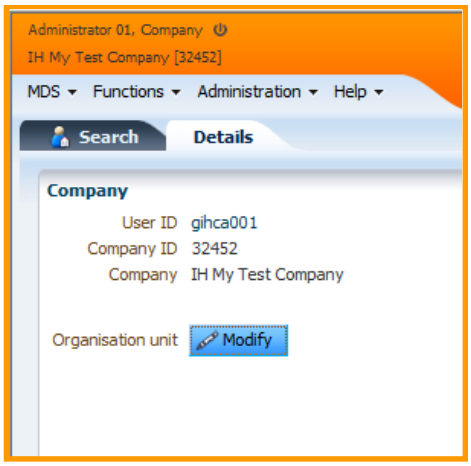
WRITE DOWN THE USER ID! For security purposes, the email sent to the Administrator and the User will not include this ID. The Administrator should convey this User ID to the User via a secure, non-IMDS-based method. The Administrator and User will receive an email similar to the following containing the password for the ID:

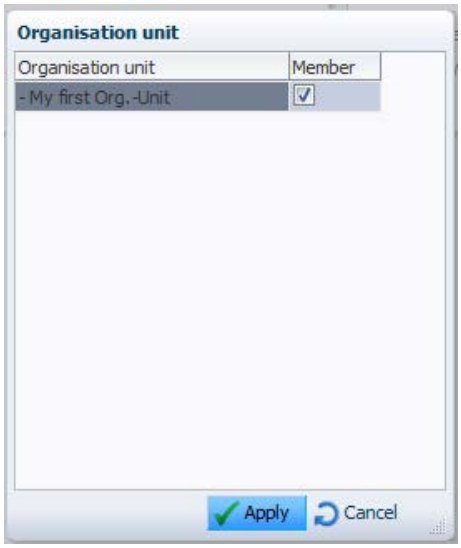


Please note the emails do not contain the User ID. It is HIGHLY recommended the user copy and paste the password from the email to the logon screen. If the Administrator did not capture the ID generated, the user can use the "ID Forgotten" button to retrieve the User ID via secure email from IMDS.

8.6.3 Assigning Org Unit to a User ID

To see Requests and MDSs sent to an Org Unit and to use the Org Unit on the Supplier Data tab, the Org Unit must be assigned to a User ID. When the Administrator clicks **Modify** in the company area of the User detail, a listing will appear of all Org Units in your IMDS Company. Check all Org Units that should be assigned to the User ID and select **Apply.**





8.6.4 Deactivating a User

Once a user leaves a company or no longer requires access to IMDS, their User ID should be deactivated. The following is the recommended process:

1) Search for the User and view the Details.
2) Set the Valid until date to today's date.
3) Save.
4) On the Search Screen, uncheck the box under Active.

8.6.5 Resetting a Password

It is the Company Administrator's responsibility to reset passwords for users in their company. To do so, find the user using Administration > User and view the details. Verify the user's email address. There will be a **Reset Password** button in the lower right. Click this button and the system will send a new Password to the user's recorded email address.

8.6.6 Trust User

Only Company Administrators have access to the Trust User menu. There are two uses for Trust User. A trusted user is a user in another company (anywhere in the supply chain, not necessarily a direct customer) to whom specific permission is granted to view all substances on your tree structures – even those marked "confidential" - no matter at what level the structure is attached. This capability is granted only to that specific user, and not other users within their company. Trust Users can view but not download your information from IMDS.

Trust User is specifically for users in other IMDS companies. Users in the own IMDS Company are not found in this search. If confidentiality of own users is concerned, then the "Confidential substances visible" attribute under Administration >> User needs to be set.

The other use for this function is to look up users in other companies. Once Administration > Trust User is chosen, a screen similar to the following will appear:

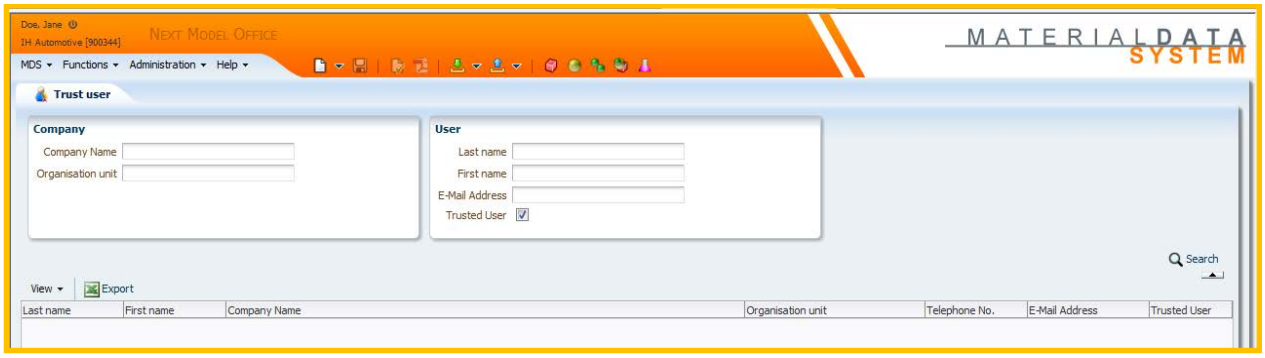
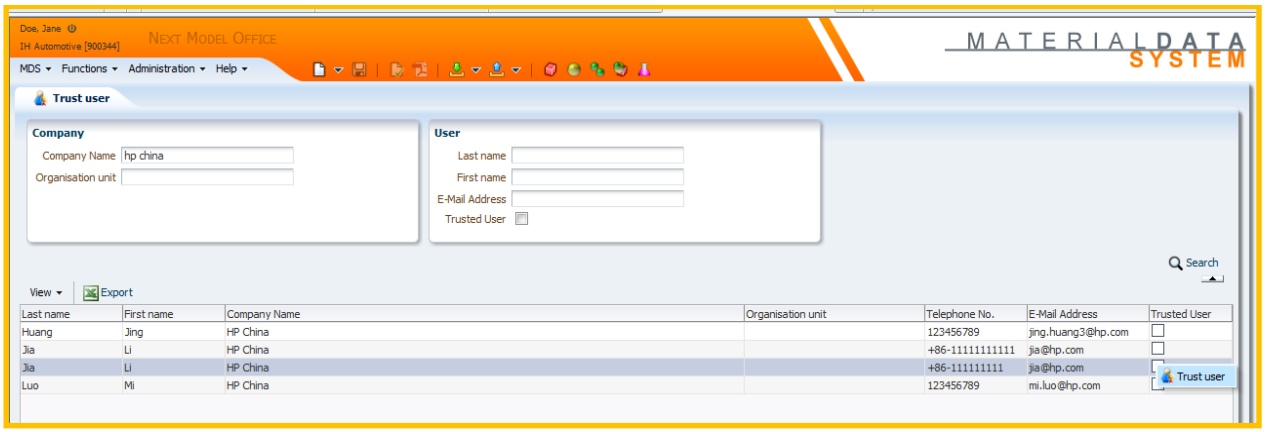


Figure 14 – Trust User Screen

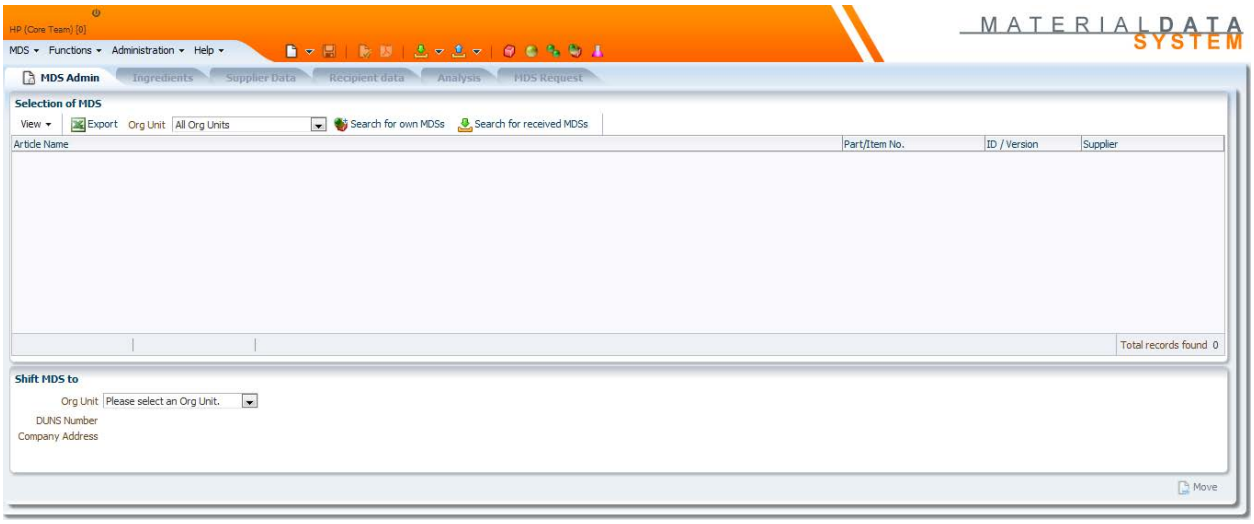
The Company Search can be used to search for a company from which to select a user. If the main search in the lower right is clicked, a list of all users for all companies is displayed as result (limited to 500 entries). Instead of this, a search can be initiated by putting a string in the Company and/or User pane and clicking Search. Once a list is returned any entry can be right-clicked on the trusted user box next to the name and designate that user as a trusted user:



8.7 MDS Admin

This option is only available to Company Administrators and allows the Administrator to move MDSs (both Own and Received) between Org Units. This can be used if a supplier has sent the MDS to the wrong Org Unit, or if one of the users in the Administrator's company has assigned the MDS to the wrong or no Org Unit. Additionally, this is used if the company has experienced a sell off and the company needs to be reorganized.

The MDS Admin screen will look similar to the following:

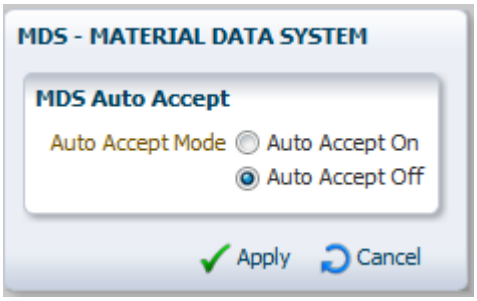

HP (Core Team) [0]
MDS Functions Administration Help
MATERIALDATA SYSTEM
MDS Admin Ingredients Supplier Data Recipient data Analysis MDS Request
Selection of MDS
View Export Org Unit All Org Units Search for own MDSs Search for received MDSs
Article Name Part/Item No. ID / Version Supplier
Total records found 0
Shift MDS to
Org Unit Please select an Org Unit.
DUNS Number
Company Address
Move

If **Search for own MDSs** is clicked, the typical search screen will open and you can search for Owned MDSs. In this situation, the accepted check boxes will be disabled. Select the MDSs in question by clicking on them (multiple selections require the Administrator hold the CTRL key while clicking) and then click **Apply**. The selections will appear at the top. The MDSs to be

moved are then highlighted. Then the Administrator may use the pull down menu beside **Org Unit** to select the Org Unit into which to move the MDSs. The Administrator then clicks **Move.**

8.8 MDS Auto Accept

If agreed upon in a company, the Company Administrator can allow a global auto accept for MDSs. If not allowed, this option is hidden.

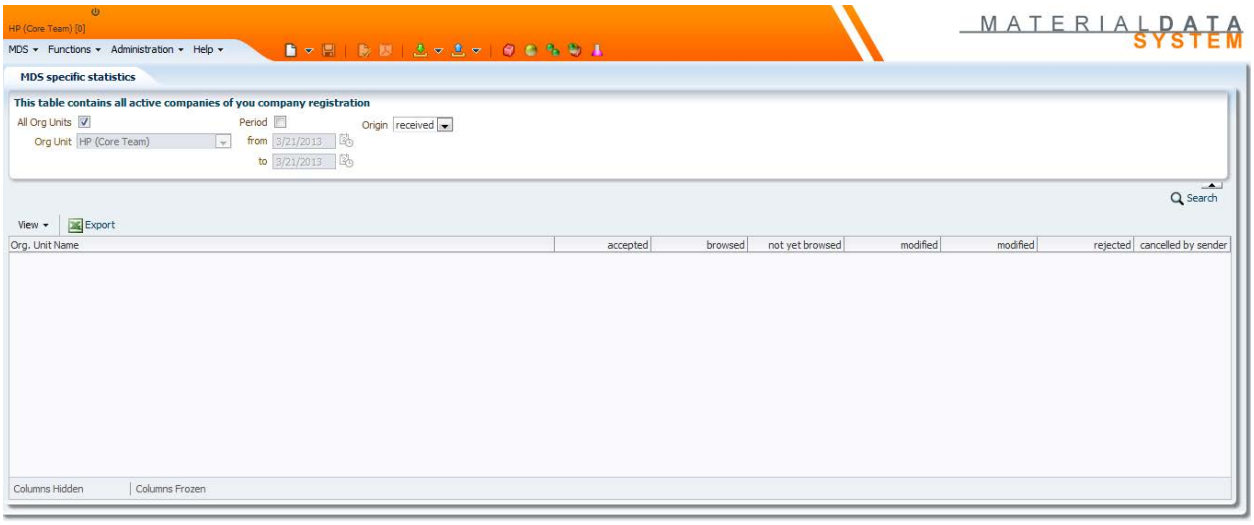


8.9 MDS Statistics

In MDS-specific statistics within the Statistics menu, the Company Administrator can filter different statistical dates, which are described in the following table:

Field	Description
All Org Units	Select the Checkbox to search for MDS statistics in all Org Units of your IMDS company
Org Unit	If "All Org Units" is not checked, the Administrator may choose a single Org Unit for which to see statistical information.
Period / From – to	The Administrator can delimitate statistics to a defined time period.
Origin	Select to see the statistical dates for received, sent or own MDSs.

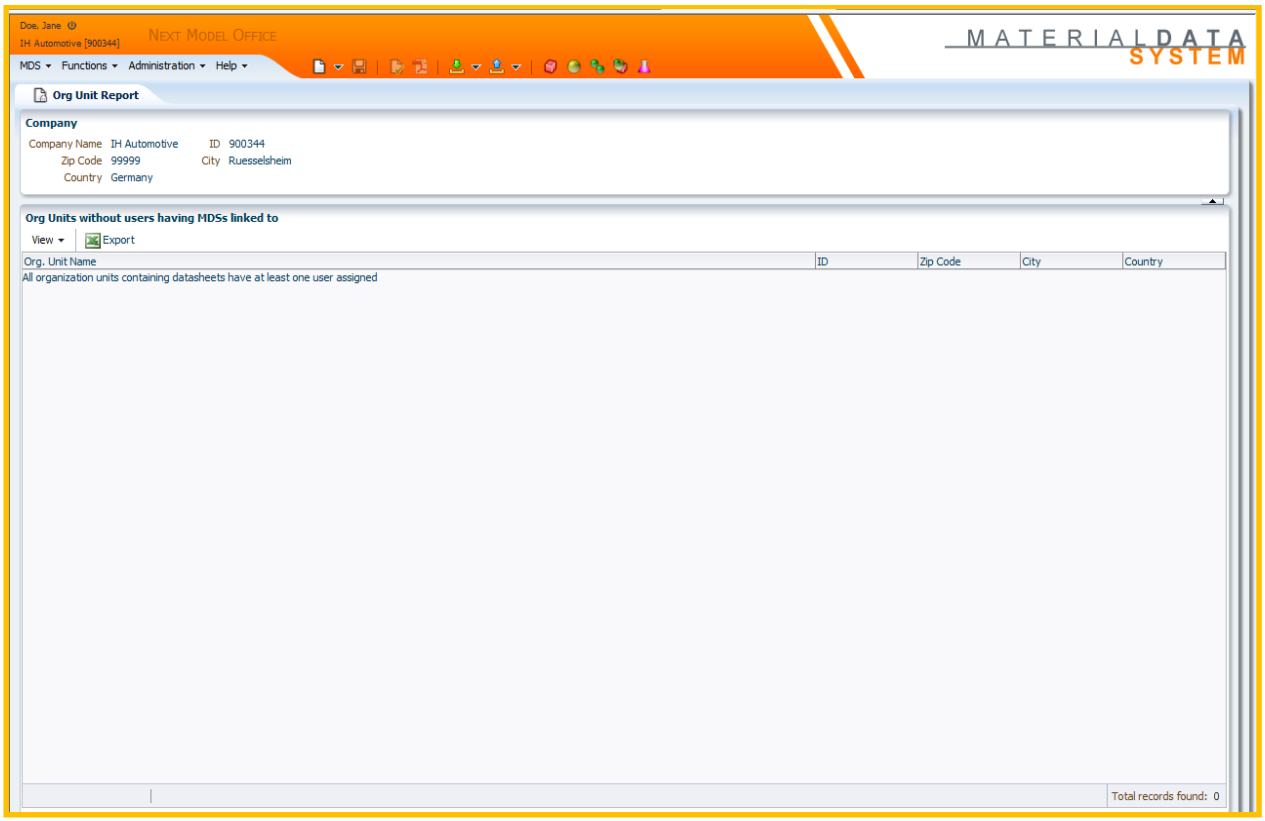
The search result table will list the quantity of MDSs for all Org Units selected with the following statuses: accepted, not yet browsed, modified, rejected and cancelled by sender.



8.10 Report Organization Units without Users – Org.-Unit Report

To successfully use Organization Units, each Organization Unit must have a user assigned. Only users with the Organisation Unit assigned can view, accept or reject MDSs sent to the Org Unit. The Org. Unit Report screen displays all organisation units without assigned users but containing created or received MDSs.

The menu **Administration > Org.-Unit Report** is used to check the Organisation Units without assigned users.



The Company Administrator needs to regularly check this report in order to assign unprocessed MDSs to Organisation Units. If a supplier sends an MDS to an Org. Unit without a user assigned, no one will ever know that it has been received as only users with the Org Unit assigned to them can view the inbox of that Org Unit. If necessary the report can be printed.

9 Aston Martin Lagonda - Extensions

9.1 Certification (to be adapted)

Supplying to Aston Martin Lagonda (AML) includes the requirement for annual certification of a supplying company's products i.e. according to AML's Restricted Reportable and Recyclable Substance Management Standard (RSMS).

AML requires each supplier to certify annually its products are in compliance with the substance prohibitions highlighted in the AML Restricted Reportable and Recyclable Substance Management Standard, except those already reported as non-compliant in IMDS. The user needs to certify using the AML GSDB code.

The certification applies to **all products** that a supplier delivers to AML. This feature is only accessible to Company Administrators or users with a User (Certification) profile. All other users do not see this menu option. For the certification, all necessary information must be provided to AML, either through the AML supplier network or using the IMDS. In the main menu the above mentioned users will find the option "Certification" – after reading and checking the user can check the box "I agree and certify".

9.2 AML-specific part numbers and supplier codes (to be adapted)

The part number for the recipient AML must be correct (Part number in the Recipient Data): AML creates a file of all acceptable part numbers and IMDS performs a check against this file and will not allow the user to send with an incorrect part number. If the part number is not in the file, please contact the AML helpdesk and not IMDS to have your part entered. Similarly, if IMDS is not accepting your supplier code, please contact AML to get your supplier code added to the file. As there is no cross check between IMDS company, GSDB and part number in IMDS, the user is responsible to ensure the part number submitted is actually one that AML expects to receive from your company.

If these numbers are not chosen from the list and are not correct, the check procedure (before sending the MDS) delivers an error message. If the user is having problems with the part number, the user may enter a partial number and click search for help identifying the correct format.

10 Chrysler Group LLC – Extensions (to be adapted)

If a company delivers to Chrysler Group LLC some additional checks are carried out for this recipient.

The following 3 fields are available in the recipient screen when Chrysler Group LLC has been selected as MDS recipient:

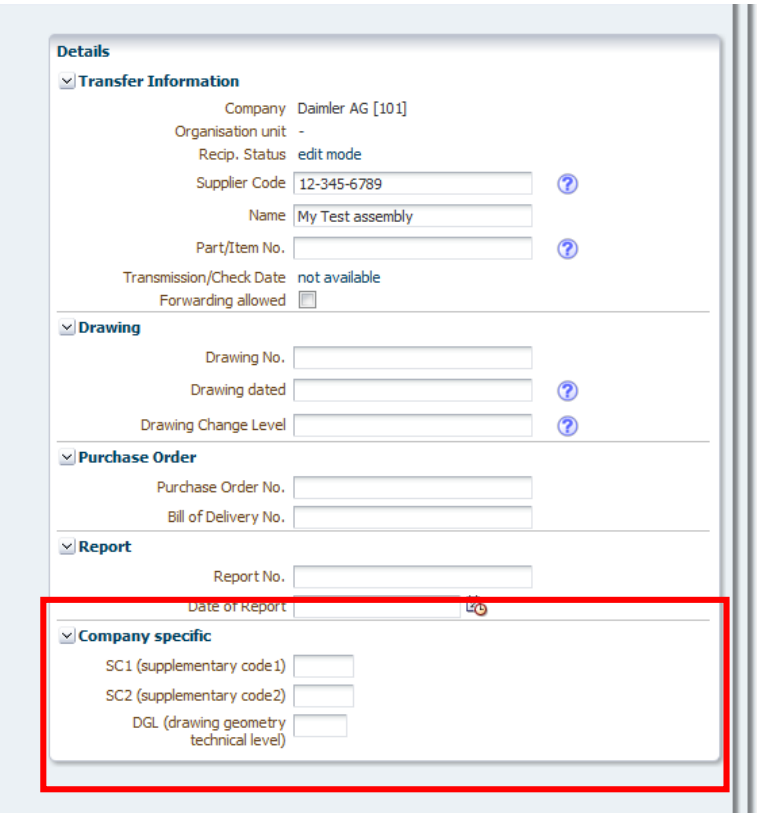
- SC1 (supplementary code1, 4 characters),
- SC2 (supplementary code2, 4 characters),
- DGL (drawing geometry technical level, 3 digits).

11 Daimler AG - Extensions

If a company delivers to Daimler AG, the following 3 fields are available in the recipient screen when Daimler AG has been selected as MDS recipient:

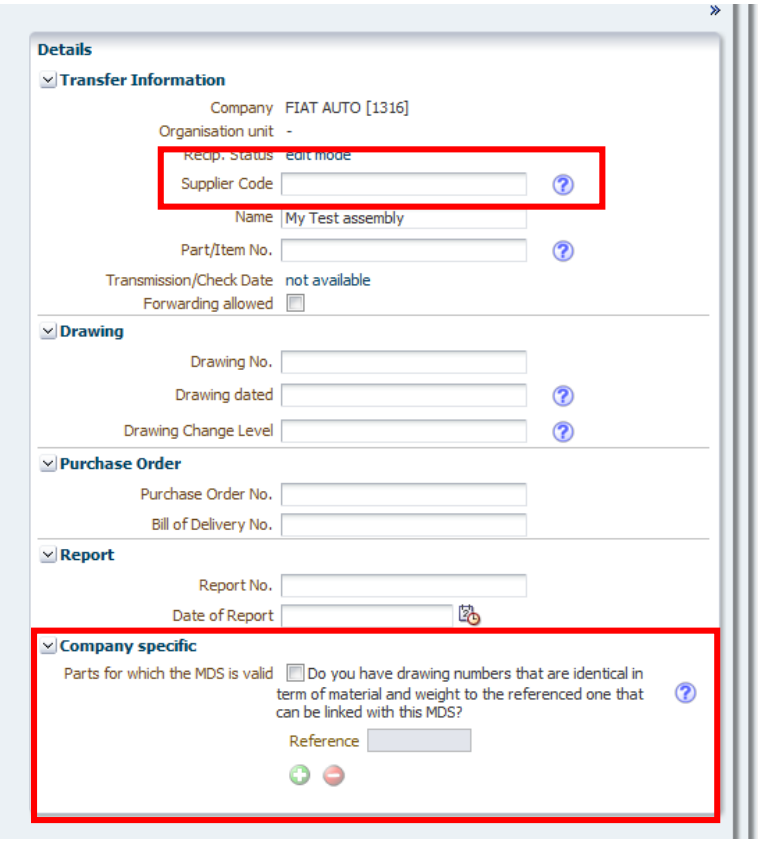
- SC1 (supplementary code1, 4 characters),
- SC2 (supplementary code2, 4 characters),
- DGL (drawing geometry technical level, 3 digits).

Additional checks are performed for these fields.



12 Fiat - Extensions

IMDS verifies the supplier Code has been entered. There is an additional recipient-specific field with confirmation for Fiat allowing one or many reference part numbers referring to the same MDS.



13 Ford Motor Company Extensions

13.1 Certification (to be adapted)

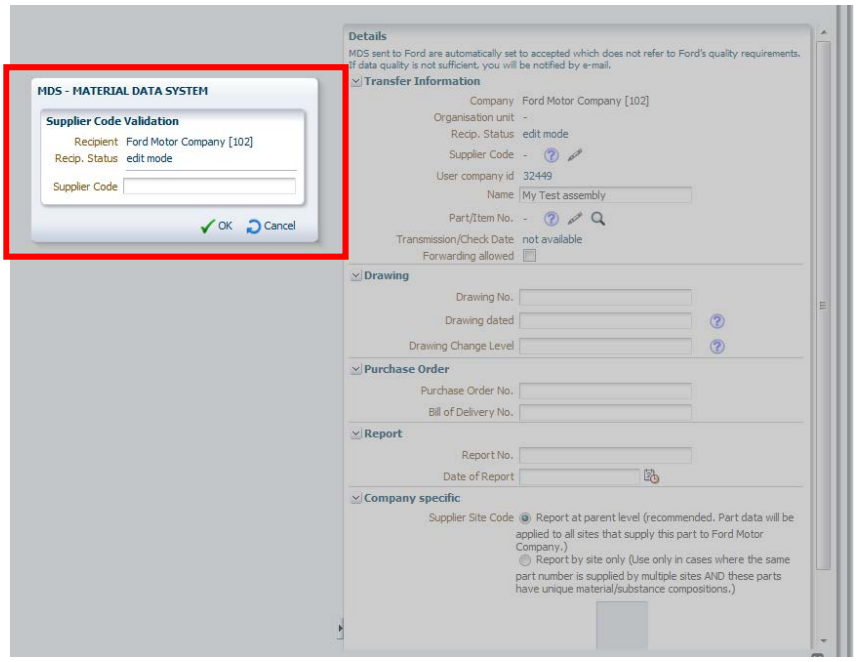
Supplying to Ford Motor Company includes the requirement of annual certification of a supplier company's products according to Ford Motor Company's Restricted Substance Management Standard (RSMS) WSS-M99P9999-A1 ("Hex 9").

Ford requires each supplier to certify annually it is in compliance with the substance prohibitions highlighted in the Ford Restricted Substance Management Standard (WSS-M99P9999-A1), except those already reported as non-compliant in IMDS. The user needs to certify either by individual site using the Ford GSDB code or for the entire company.

The certification applies to **all products** that a supplier delivers to Ford Motor Company. This feature is only accessible to Company Administrators or users with a User (Certification) profile. All other users do not see this menu option. For the certification, all necessary information must be provided to Ford Motor Company, either through the Ford Motor Company supplier network or using the IMDS. In the main menu, the above-mentioned users will find the button "Certification" – after reading and checking the user can check the box "I agree and certify".

13.2 Ford-specific part numbers and supplier codes

The part number for the recipient Ford Motor Company must be correct (Part number in the recipient data). Ford creates a file of all acceptable part numbers and IMDS performs a check against this file and will not allow a user to send with an incorrect part number. If the part number is not found, please contact the Ford helpdesk and not IMDS to have the part added. Similarly, if IMDS is not accepting your supplier code, please contact Ford to get the supplier code added. As there is no cross check between IMDS company, GSDB and part number in IMDS, the user are responsible to ensure the part number submitted is actually one Ford expects to receive from your company.

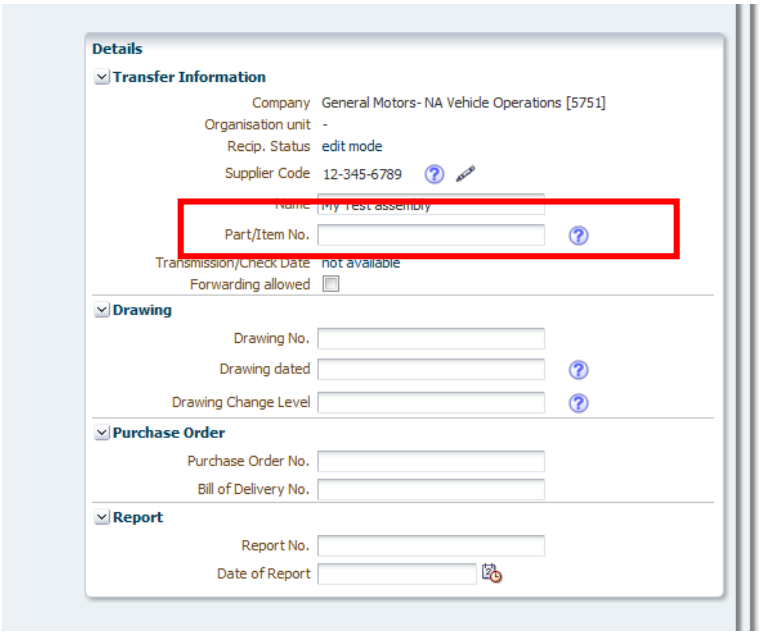

MDS - MATERIAL DATA SYSTEM
Supplier Code Validation
Recipient Ford Motor Company [102]
Recip. Status edit mode
Supplier Code
OK
Cancel
Details
MDS sent to Ford are automatically set to accepted which does not refer to Ford's quality requirements. If data quality is not sufficient, you will be notified by e-mail.
Transfer Information
Company Ford Motor Company [102]
Organisation unit -
Recip. Status edit mode
Supplier Code -
User company id 32449
Name My Test assembly
Part/Item No. -
Transmission/Check Date not available
Forwarding allowed
Drawing
Drawing No.
Drawing dated
Drawing Change Level
Purchase Order
Purchase Order No.
Bill of Delivery No.
Report
Report No.
Date of Report
Company specific
Supplier Site Code
Report at parent level (recommended. Part data will be applied to all sites that supply this part to Ford Motor Company.)
Report by site only (Use only in cases where the same part number is supplied by multiple sites AND these parts have unique material/substance compositions.)

If these numbers are not chosen from the list and are not correct, the check procedure (before sending the MDS) delivers an error message. If the user is having problems with the part number, entering a partial number and clicking search may help identify the proper format.

Only if all information required for Ford Motor Company is entered the check will be successful.

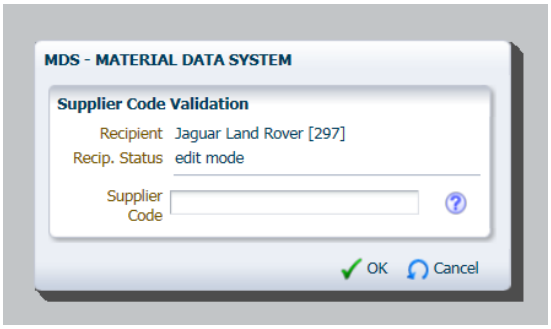
14 General Motors - Extensions

If a company delivers to one of the General Motors or Opel companies, a check is made to ensure that the part number meets the General Motors numbering schema.

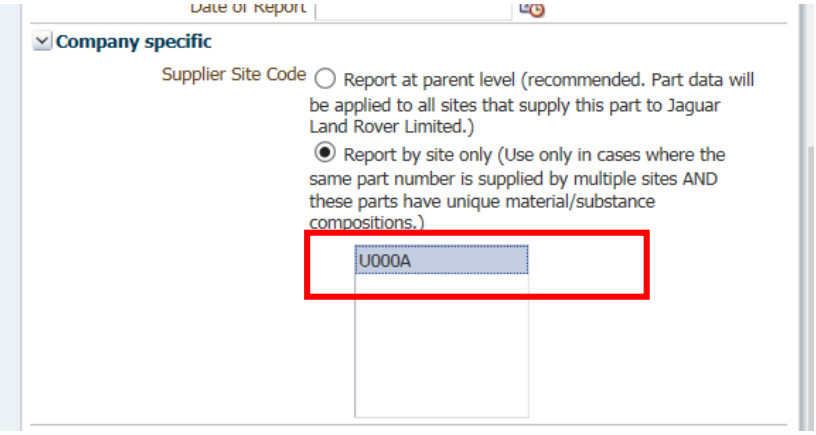


15 Jaguar Land Rover - Extensions

If IMDS is not accepting your supplier code, please contact Jaguar Land Rover to get the supplier code added. As there is no cross check between IMDS company, GSDB and part number in IMDS, the user are responsible to ensure the part number submitted is actually one Jaguar Land Rover expects to receive from your company.



In this screen, which appears after choosing Jaguar Land Rover as recipient, you need to enter your 4-digit Parent Site code (this should be available on your Purchase Order. If you need help regarding your GSDB Codes please contact your buyer at Jaguar Land Rover. After this code is entered, on the right hand side of the screen the following company-specific option will be displayed, and you need to choose Reporting by site:


Company specific
Supplier Site Code
Report at parent level (recommended. Part data will be applied to all sites that supply this part to Jaguar Land Rover Limited.)
Report by site only (Use only in cases where the same part number is supplied by multiple sites AND these parts have unique material/substance compositions.)
U000A

Reporting at parent level leads to an error message and you cannot send the MDS.

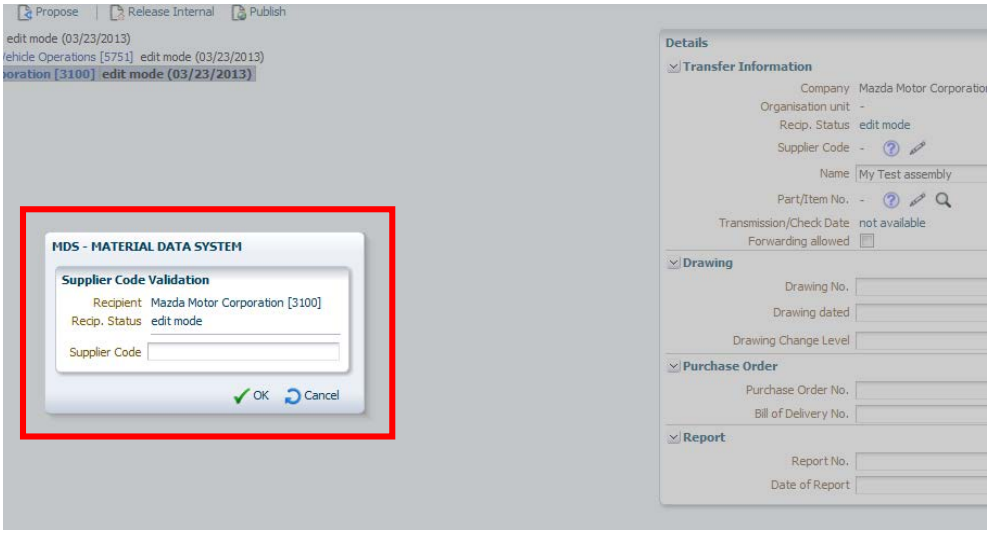
If the user is having problems with the part number, entering a partial number and clicking search may help identify the proper format.

Only if all information required for Jaguar Land Rover is entered the check will be successful.

16 Mazda – Extensions

If a company delivers to Mazda Motor Corp., the following check for this recipient is carried out.

- Mazda creates a part number file and a supplier code file, and IMDS checks both before allowing the user to send. If the part number or code is not found, please contact Mazda to correct the problem.



Only if all required information for Mazda Motor Corporation is valid will the check will be successful.

17 Nissan Motors-specific enhancements

Nissan-specific Tolerance - Error 5%

If there is a tolerance higher than 5% in the top node, the MDS cannot be sent to Nissan.

Polymeric Parts Marked

If an MDS is released for Nissan, parts marking checks are performed to ensure compliance with the following requirements:

Material classification 5.x are separated into the following two groups:

Group1: 5.1, 5.1.x, 5.4, 5.4.x, 5.5, 5.5.x

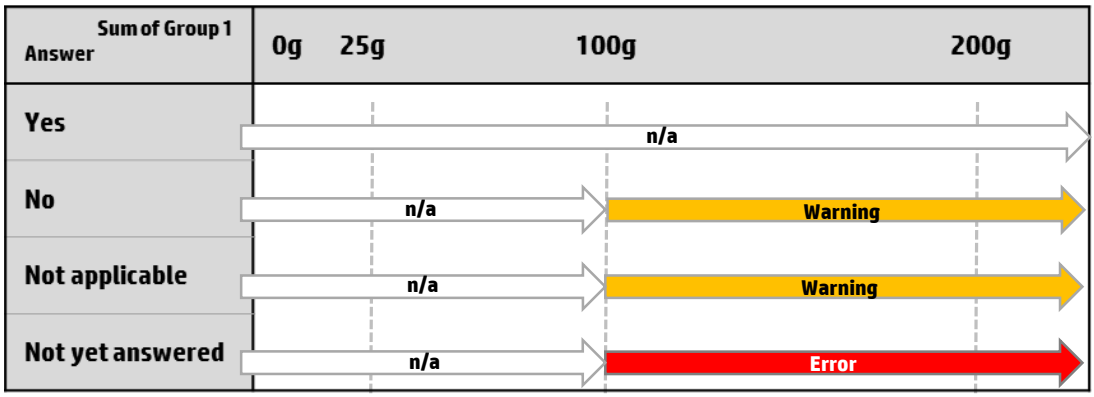
Group2: 5.2, 5.3

The threshold is set against the following 2 values:

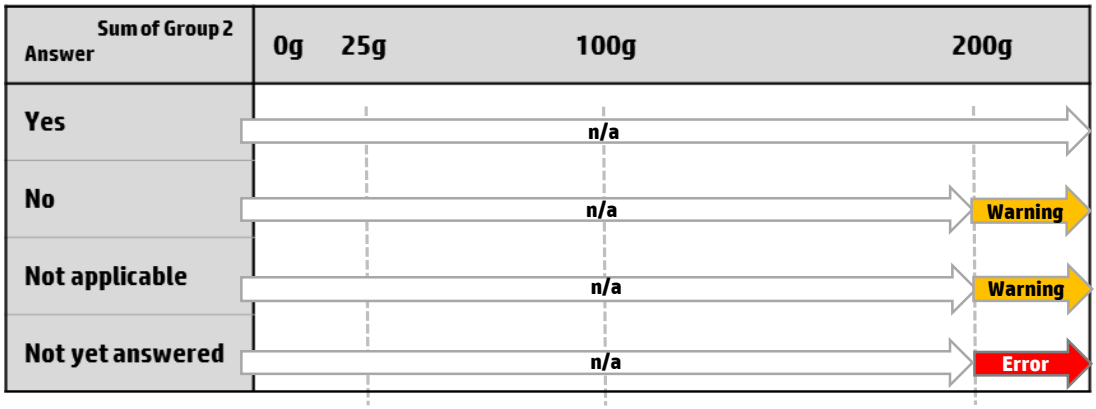
Sum of the weights of the materials categorized into Group1.

Sum of the weights of the materials categorized into Group2.

Threshold against Value (a)



Threshold against Value (b)



Standard IMDS Check: If the component contains more than 25g of polymeric materials (classifications 5.1.x, 5.3 and 5.4.1), the parts marking question must have a response, or a warning will be displayed.

Prohibited Substance Check

If an MDS is sent to Nissan, it is checked for prohibited substances according to GADSL. If there are prohibited substances contained, a Warning is displayed.

Material Symbol Check

The entire product structure tree is checked for missing material symbols. If there is a Polymer of the classifications 5.1.x, 5.2 or 5.3 contained in the structure tree without a symbol, the MDS cannot be sent to Nissan (Error).

Wildcard Check

The Joker „Request/Hg/Cr6/Cd/Pb“ must not be used in any MDS sent to Nissan.

New Field in recipient-specific data for sending/proposing to Nissan

“All Jokers have been used for non-GADSL substances only” - This field (yes/no) is only available when sending the MDS to the Nissan Motor Corporation [13662]. By selecting “Yes”, you confirm that neither you nor your suppliers used GADSL substances and hid them by referencing a basic substance joker. When performing a check on the MDS, not selecting “Yes” results in an error and thus prevents you from sending the MDS to Nissan.

Note: It is **never** acceptable to include GADSL substances in an MDS as jokers. GADSL substances must always be reported, unless below the tolerance threshold (usually 0.1%) and not deliberately introduced into the material. Even then, these materials must not be masked as Jokers. Nissan requires the explicit confirmation Jokers have not been used to mask GADSL substances, but this requirement is inherent through acceptance of the IMDS Terms of Use in every MDS submitted.

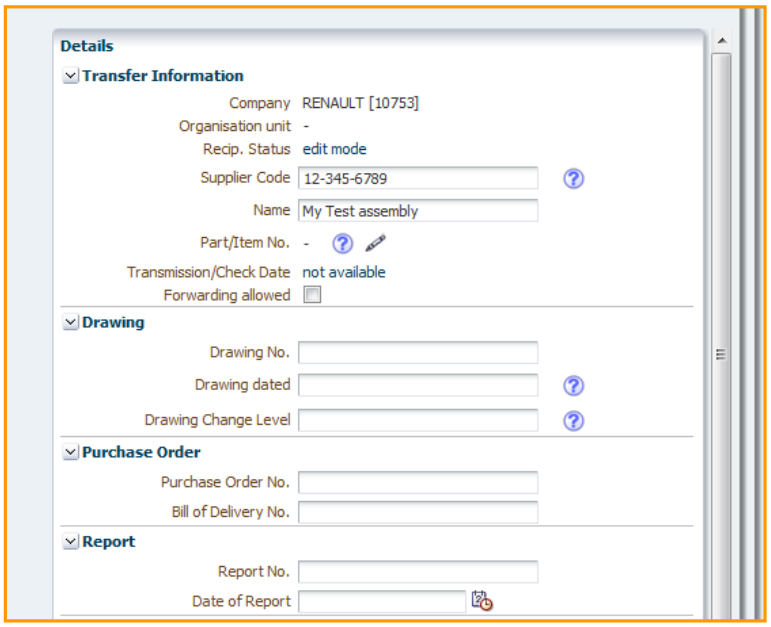
Furthermore, Nissan will not accept an MDS marked as “Development Sample Report”. Therefore, if Nissan is the intended recipient of such an MDS, an error message will be generated. For any MDS which will be submitted to Nissan, we highly recommend adding Nissan as the recipient before running the check procedure.

18 Renault - Extensions

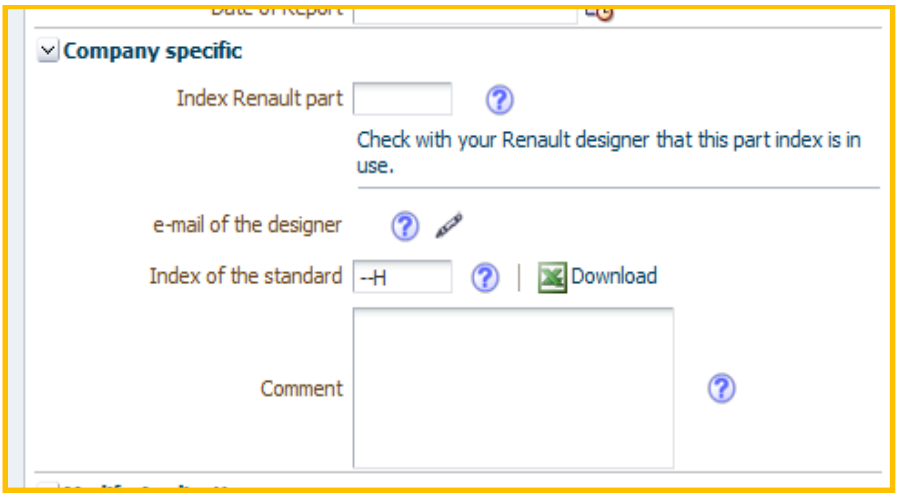
If a company delivers to Renault, a note appears in tab 4 at on the top of the company data screen, telling the user the MDS will be converted automatically into an Excel Sheet (MCV file) and will be sent to a Renault designer. The converting job is processed once a day every day (typically during the morning CET time).

Additionally, the following checks for this recipient are carried out in the form.

The supplier must complete the Part/Item No. and Supplier Code of this screen, as these fields are mandatory. The Part/Item No. must have 10 alphanumeric characters and the Supplier Code 6 digits. Selecting the blue colored links provides help.



After scrolling down, additional details appear for Renault suppliers. This is an enhanced Renault company data screen, with fields only required by Renault.



In the enhanced company –specific portion of the screen, the following fields are mandatory:

1. Index Renault part
2. E-mail address
3. Confirmation of the e-mail address
4. Index of the standard (already filled with - - H) (with Download button for the Renault substance-Standard 00-10-050/--H)

Only if all mandatory information for Renault was properly completed will the check be successful.

Here you will find a summary of all Renault checks running before an MDS is sent or proposed.

Check routine	Text in the check window
In the Company-specific part the E-Mail confirmation fails.	The two e-mail addresses do not match.
In the Company-specific part the E-Mail address of the Designer must be filled.	E-mail address of the designer has to be entered.
In the Company-specific part the index of the Renault part must be filled in a correct format.	Please enter a correct index of the Renault part.
In the Company-specific part the Substances standard must be filled in a correct format.	Please enter a correct index of the standard.
The tolerance between measured and calculated weight must not be larger than 20%.	The deviation between measured and calculated weight per item must not exceed 20%.
The constellation Material under Material is generally not allowed in a Renault MDS tree (chapter Ingredients)	Material below another material is not allowed.

Renault will not accept an MDS marked as “Development Sample Report”. Therefore, if Renault is the intended recipient of such an MDS, an error message will be generated. For any MDS which will be submitted to Renault, we highly recommend adding Renault as the recipient before running the check procedure.

19 Scania - Extensions

If a company delivers to Scania, some additional checks are carried out for this recipient.

Part number:

The Scania part number shall be specified with numbers only, no special characters, no leading '0' allowed.

Drawing change level:

The data field Drawing Change Level refers to the Scania Engineering Change Order (ECO) number which is used to specify different versions of parts. The ECO number can be found on the Scania part drawing.

This field is mandatory. When no ECO applies, a "0" shall be entered in the field.

The ECO number shall be specified with only numerical digits, no special characters, no text.

Supplier code:

Specify the Scania supplier number, 7 numerical digits. (Example: "0123401")

This field is mandatory. The supplier number will be checked by the Scania in-house system against a list of contracted suppliers for the Scania part.

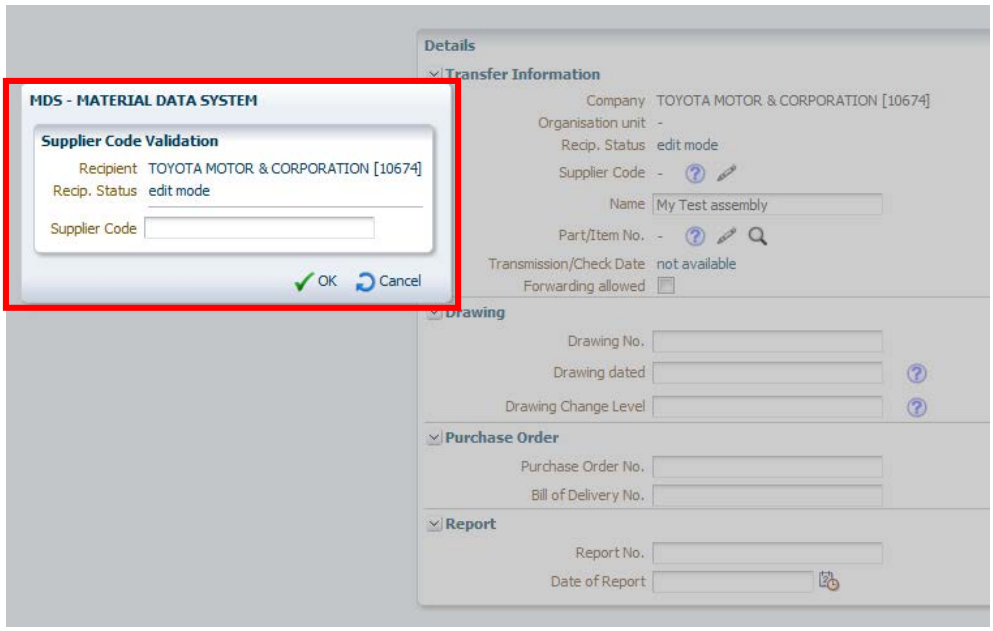
If the user does not know the 7-digits supplier number, contact the Scania purchaser.

Additionally, Scania will not accept an MDS marked as "Development Sample Report". Therefore, if Scania is the intended recipient of such an MDS, an error message will be generated. For any MDS which will be submitted to Scania, we highly recommend adding Scania as the recipient before running the check procedure.

20 Toyota - Extensions

If a company delivers to Toyota Motor Corporation some additional checks are carried out for this recipient.

- Toyota part numbers and supplier codes (requests) are mandatory (even if both do not match, the MDS can be sent to Toyota).
- The part number format must comply with the Toyota-specified part number format.
- At least one standard or Toyota in-house norm must be selected for material MDSs. (when sending to company 10674 only)
- The tree structure (component/semi-component-material-substance structure) must be correct as specified in IMDS Recommendation 001.

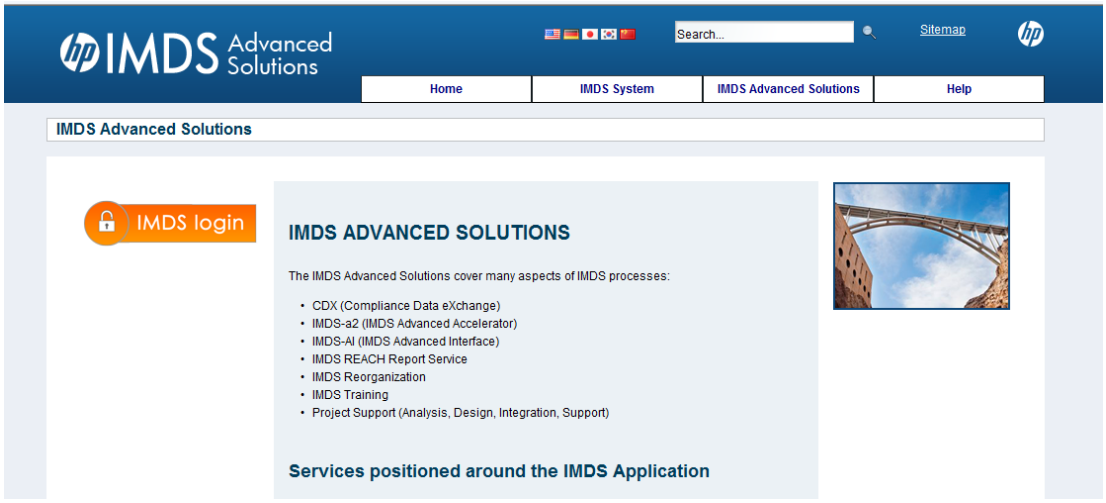


Only if all required information for Toyota Motor Corporation is entered will the MDS pass the checks.

21 IMDS – Add-on Services

IMDS capabilities extend beyond the basic services available in the standard offering. This chapter introduces these additional services. More information on additional IMDS services can be found on the IMDS Advanced Solution pages under

https://public.mdsystem.com/web/imds-public-pages/imds-solutions



21.1 IMDS-a2 (IMDS Advanced Accelerator)

The IMDS-a2 simplifies data input into IMDS, increases productivity of IMDS users and accelerates review of incoming datasheets. For years the IMDS-a2 has been a proven tool to speed up the data entry for many IMDS users. New features within IMDS-a2 allow users to optimize IMDS processes, data management and quality.

Key features of the IMDS-a2

- Simplified User Interface and multiple simultaneous windows
- Configurable checks that allow rules to be set up for different customers (Examiner function)
- Automatically checks incoming datasheets based on User selected rules
- Dashboard to easily view the status of datasheets and MDS requests
- Reports to identify incomplete information and support supplier management

- Improved search mechanism and drag & drop support
- Configurable search results display and export function for all search results
- Temporary local data caching to increase productivity

21.2 IMDS Advanced Interface (IMDS-AI)

The IMDS Advanced Interface (IMDS-AI) allows companies to leverage data in current systems and receive productivity improvements by reducing the effort required for data gathering, formatting and entering data into IMDS. The IMDS-AI enables companies to automatically exchange material datasheets from any in-house system to IMDS through XML code, thus more closely integrates IMDS with local processes.

The IMDS-AI gives a company the ability to transfer all visible data from IMDS to an in-house system. This includes published datasheets, internally released datasheets, and received datasheets. Depending on existing requirements, the IMDS-AI interface allows companies to download the received datasheets prior to acceptance so automated checks can assist in accepting and rejecting MDSs – or accepting and rejecting can be done in the browser version and just the received and accepted datasheets be download.

Through the upload functionality, companies can create datasheets in IMDS.

21.3 REACH Report

REACH is the European Regulation dealing with Registration, Evaluation, Authorization and restriction of certain Chemicals used in products. The REACH directive's primary focus is on substances with potential impact to human health and/or the environment. These substances are commonly known as Substances of Very High Concern (SVHC).

In order to fulfill the legal requirements for the automotive industry, you need to know what is in your product. One major source of information is the IMDS. Based on the numerous requests we have received for a report on the data that is associated with a company in IMDS, we have created the REACH Reports Service. This service presents, in one downloadable report, a complete overview of material data received from your suppliers or created by your company in IMDS including accumulated weight information on components and all materials and substances. The report also presents additional information to the substances which allows for

easy analysis for REACH-SVHCs or substances that are on the GADSL (Global Automotive Declarable Substance List).

Depending on your needs, we can provide this report in different file formats such as XML (Extensible Markup Language), CSV (Comma Separated Values) or Microsoft Excel. You can then process these reports with standard software to fulfil your needs for REACH compliance reporting as well as other legal obligations (for example: RRR, “Canadian Challenge”). We can also provide this report multiple times throughout the year (for example quarterly, monthly).

21.4 IMDS Reorganization

As companies change ownership or internal IMDS processes, they frequently want to change how their data is organized in IMDS. To assist these companies, HP offers two types of reorganization services:

21.4.1 Company Merge - Consolidation of two or more IMDS companies to one IMDS company

The following describes typical cases of a Company Merge:

1. Data in one "roof" company without any organization units is moved to a target "roof" company without any organization units.
2. Data in a "roof" company with one or more organization units is moved to a target "roof" company with no organization units.
3. Data in a "roof" company with no organization units is moved to an organization unit of a target company.
4. Data in a "roof" company with several organization units is shifted to a target company with organization units with the source organization units individually mapped to organization units in the target company.

Although most company merges involve source companies without organization units, the standard procedure and pricing will allow a mixture of the above cases. However, prior to requesting a merge, the Company Administrator is required to create the target company structure that will receive the data. The new structure may or may not have organization units and may or may not be one of the existing IMDS companies. Please note that at most one of the source company IDs can be retained.

21.4.2 Company SplitOff - Separation of an organization unit from an IMDS roof company

The Company SplitOff service transfers the data from one or more organization unit(s) within one IMDS roof company into a different IMDS roof company. Please note that it is the responsibility of the company administrator in the source company to ensure data is in the Organization Unit to be transferred. This service assumes the data to be moved currently resides in an Organization Unit. Many companies think they are using Organization Units because they have defined them - but are not. Either there are no users assigned to the Org Unit or the users are not placing the data in the Org Unit on the Supplier Data chapter of the MDS.

It should be noted that **NOT ALL DATA CAN BE SEPARATED OR TRANSFERRED**. The amount of transferable data depends on how intertwined or "referenced" the data is. In the end, a data sheet can reside only in one company - it either goes or stays but it cannot reside in two IMDS companies.

If an MDS that is to be transferred and an MDS that will stay both reference the same datasheet, the MDS that the user wants to transfer cannot be moved. If an MDS that will stay references an MDS that is to be transferred, that MDS cannot be moved. The only exception to this is if the "referenced" MDS is published. For example, if your source company has created a library of materials that is used by both by Organization Units that are staying and those being moved out, the data referencing the common materials cannot be moved by this process. The exception is that if those materials were published.

As part of the Company SplitOff procedure, HP will perform up to two analyses. It is very important that the requestor review what the analysis is saying and take action if the analysis indicates that data cannot be transferred. HP cannot move data that analysis shows cannot be moved. Due to how IMDS works, we cannot "copy" data from one company to another.

21.5 IMDS Conflict Minerals Analyzer (IMDS CM Analyzer)

HP's new IMDS CM Analyzer will help the IMDS user community understand and comply with US Conflict Minerals Act legislation. It provides IMDS users with the fastest and easiest method available to examine their suppliers' existing material data sheets (MDSs) and locate conflict minerals within their products. IMDS users can then choose to have these results sent to the Compliance Data Exchange (CDX), and then have CDX automatically produce and email requests to these suppliers asking to submit a Conflict Mineral Declaration in CDX.

These new capabilities facilitate compliance by streamlining the conflict mineral location, identification, and feedback request processes, thus automating all possible operations in a straightforward fashion, and throughout the entire supply chain.

Benefits:

HP's IMDS CM Analyzer provides a number of benefits to IMDS users, including:

- Provides a simple approach to identify conflict minerals within your supply chain
- Leverages HP's knowledge of the IMDS environment to make navigation simple and straightforward
- Provides accurate analysis results in a timely manner
- Uses the functionality of CDX, which was based upon the successful IMDS

More information: https://public.mdsystem.com/en/web/imds-public-pages/cm-analyzer

21.6 CoChecker module in IMDS-a2

CoChecks using IMDS-a2: An HP Service in Collaboration with tec4U-Solutions

The IMDS-a2 CoChecker module extracts the content of selected material data sheets (MDSs) directly from the IMDS and save them as XML files on your PC. IMDS-a2 users can easily extract one or more components for the checks and simple pass the prepared dates to tec4U's CoChecker software. The CoChecker software checks against the specified conformity requirements based on your IMDS data. The result is a certificate of compliance with given specifications. This helps you ensure material compliance with less time and effort by your employees, and trust in your products by your customers.

IMDS-a2 CoChecker Module Functionality:

CoChecker is easy to use. The MDSs to be analyzed can be added quickly and easily to the CoChecker window using “drag and drop” from different IMDS-a2 search windows, including:

- Inbox
- Outbox
- MDS / component / semi-component / material search

- Where-used analysis

After choosing the target directory on your PC, the required XML files are then generated from the defined MDSs - one file for each MDS. You can process up to 30 MDSs at once. You then transfer the generated XML files to tec4U to be analyzed by the CoChecker software.

More information: https://public.mdsystem.com/en/web/imds-public-pages/cochecker

22 IMDS – Useful Information

The following section contains important supplemental information about IMDS.

Automatic Log-Out after 60 Minutes Inactivity

To provide improved data security, optimum performance, and system availability, IMDS users that have not saved/updated within the last 60 minutes are automatically logged out. **Please note:** Generally speaking, entering information into a screen without pressing "save" or another "action" does not register as activity. To avoid losing the information entered on your screen, always remember to save or update before discontinuing use.

Terms of Use for IMDS

The IMDS Terms of Use are an agreement between IMDS Users and the IMDS System providers, providing a summary of the rights and responsibilities of each. Every user is required to read, understand and accept the Terms of Use during their first login. The Terms of Use are also available from a link on the IMDS Login window. Failure to comply with the Terms of Use may be grounds for censure up to and including being barred from using IMDS, and in some cases, may subject violators to legal action. Highlights from the Terms of Use include:

- IMDS may not be used for any purpose other than those explicitly stated
- IMDS IDs are issued to a specific individual. ID sharing is never permitted.
- IMDS Company Administrators (formerly Company Administrators) are responsible to create and maintain User accounts. It is not the responsibility of the IMDS system provider or maintainer to perform these tasks, except in limited cases with extensive documentation when all Company Administrators have permanently left the company.
- Information entered into IMDS must be correct, to the User's knowledge.

Duplicate Registrations

In IMDS, a company is permitted to register multiple physical locations either as multiple "Org Units" under a single umbrella registration, or to register multiple physical locations separately. However, when one physical location is registered for a company more than once, using similar names, this may be a "duplicate registration". There is one and only one legitimate use for two registrations with the same address and similar names: If a company has distinct, separate processes which share a physical location but operate upon different materials/parts, for different customers, from different suppliers, using different personnel, this is essentially two

facilities occupying the same physical address, and is permitted. In all other instances, this is a duplicate registration, and is not permitted. If a company has a duplicate registration, the IMDS Helpdesks will work to resolve the duplicate registration before providing any other support.

There are several reasons duplicate registrations are not permitted, mostly for the registering company's protection. First and foremost, under the strict European Union (EU) privacy and data confidentiality laws which govern IMDS (which operates from Germany), under some circumstances duplicate registrations can violate EU law. Duplicate registrations can also lead to unnecessary expenses, as the only ways to "merge" duplicate registrations involve either contracting with the IMDS Supplier to perform a for-cost data merge operation, or to perform a potentially time-consuming send/propose upon each MDS in the secondary registration. Duplicate registrations also unnecessarily increase system maintenance costs, artificially inflate the number of reporting entities in IMDS, and potentially create confusion among customers and suppliers.

There have been proposals for IMDS to implement system protections to prevent duplicate registrations, using schemes such as more flexible searches for repeating information among company registration names, or requiring DUNS/Ultimate DUNS numbers for each registration. Each of these methods creates barriers to registration of legitimate entities, and has therefore been declined. Avoidance of duplicate registrations is therefore on the "Honor system". All companies are required to take precautions to prevent and eliminate registration duplication.

User Account Maintenance

As explained in the Terms of Use, each IMDS Company is required to assign at least one and preferably two or more Company Administrators (formerly Client Managers) to create and maintain user accounts. All users are responsible to maintain their names, phone numbers, and email addresses for their individual logins, and to log in at least once a year to keep their accounts active. Company Administrators are responsible to verify this information is maintained and address any gaps. In addition, Company Administrators are responsible to maintain the privileges granted each user, to ensure that users' "Valid Until" dates are maintained, and to deactivate any users that are no longer associated with the company's material reporting, either through reassignment or because of separation of employment or extended leave.

Company Administrators are strongly encouraged to verify all user accounts within the company at least once a quarter, paying special attention to user names, email addresses, "Active" status, assigned roles, and "Valid Until" dates. This should require no more than 10-15 minutes per quarter / 1 hour per year for all but the largest companies. As with automobile oil changes, this preventive maintenance is essential for smooth operations and can help to avoid

major challenges. Extensive supporting documentation regarding how to perform these tasks is available elsewhere in this manual. There are also several useful references, including step-by-step instructions, available from the IMDS Public Information Pages.

Importance of Correct Email addresses

Anyone can occasionally lose or forget their User ID or Password, so IMDS provides automated mechanisms for all users to retrieve their ID and/or password using the "Forgot ID" and "Forgot Password" links from the login screen. However, these features operate only if the User's email address is correct in IMDS. This is a legally required security feature. A user's working ID and password is the primary mechanism to verify their identity. The Company Administrators are capable to update the email address for all their company's users, and so is the secondary method to re-enable these users. The automated links and registered email address is the tertiary "backup" method. When none of these methods is available, extensive documentation is required to re-verify the user should be authorized to access the proprietary / confidential information stored within IMDS. This consideration requires special attention following a company sale, merge, or name change resulting in a change in email domains, as failure to update the email addresses may result in all users within a company losing the capability to regain access.

IMDS Support Centers and User Accounts

Many have grown accustomed to contacting Support Centers when having Website account issues. This model does **not** apply for IMDS. The information in IMDS is confidential and/or proprietary, and there are extensive EU regulations regarding access to an entity's confidential/proprietary data. Think of the Support Center providing access to IMDS information as analogous to your Accountant giving access to your financial records, or your Doctor sharing your medical records. Support requesters know they are authorized to access the information, but without the appropriate verification, the Support Center does not, and cannot and should not provide access without appropriate and in some cases legally required safeguards.

Users should be aware most account support issues are not within the "scope" of the IMDS Support Centers. The Support Centers are contracted to ensure system outages are reported and resolved, and to answer questions regarding IMDS usage. Managing User IDs and ensuring accounts do not expire is the responsibility of the Customer Administrators. Only when a company has two or more Customer Administrators, and all are no longer with the company is the Helpdesk authorized and responsible to assist with client account management. This has as much to do with legal requirements as it does expenses. Most companies using IMDS and the Service Centers do so without any direct cost or expense, beyond the not-insignificant time and

effort of creating and maintaining their MDSs. Please help maintain this relatively low cost by maintaining user accounts –as agreed in the Terms of Use - as well as the MDSs.

Browser Versions for IMDS Use

The following browsers have been tested and when properly configured support the full functionality of IMDS. Browsers and Browser versions not listed below have either not been tested sufficiently, or have been found to have issues

Microsoft Internet Explorer Release 10.0

Firefox (current version)

Chrome (current version)

Most IMDS functions should work with other browsers. Explicitly excluded from support is Microsoft IE 6.0 or older versions, which does not support adequate security or functionality and is actively discouraged.

Browser settings:

- **Compatibility Mode** For Internet Explorer 8 and 9, only Native mode is supported. View Compatibility mode should be disabled.
- **XMLHTTP** XMLHTTP support must be enabled.
- **JavaScript** JavaScript support must be enabled.
- **Style Sheets** Style sheet support must be enabled.
- **Browser Add-ons** You should disable or remove third party browser add-ons because they have the capability to negatively interfere with the execution of the browser and the ADF Faces client framework.
- **Cookies** You need to allow session cookies to be stored in your browser at least for the domain mdsystem.com.

All browser versions supported by the IMDS application can be found on the IMDS Information Pages **http://www.mdsystem.com → IMDS Information Pages → IMDS System**.

Substances

Substances cannot be created the same way as components, semi-components or materials. If you do not find the substance you need, please use unique identifiers such as the CAS number for searching the particular substance. Should a substance need to be added to the list, the substance request function must be used.

Languages

Users may select to have labels, menu options, buttons, etc. displayed in the following languages: English, German, Chinese, Japanese, Spanish, French, Italian, Portuguese and Korean. However, all data entry must be performed in English only. IMDS does not translate user entries in text fields.

The language displayed is based upon the language selected during logon. Popups need to be enabled in the Browser settings, as the User Manual is displayed as a PDF document in the user's browser. Online help is available in English only.

Faded Icons / Symbols

If the symbol of nodes in the product structure is displayed in a faded colour, the referenced MDS or Substance was deleted.

Selecting an Item

Double-clicking on an item brings up the Details of the item. The user may also right-click and select the Edit / View option.

Exporting results to an xls file

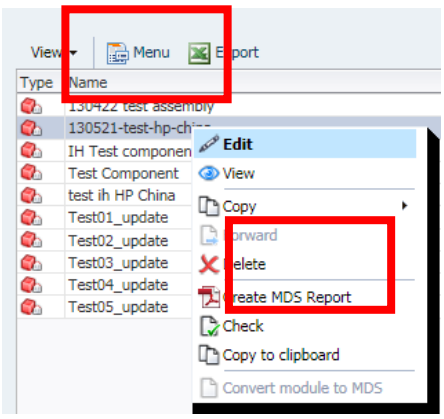
The results in a result table can be exported to MS Excel using the

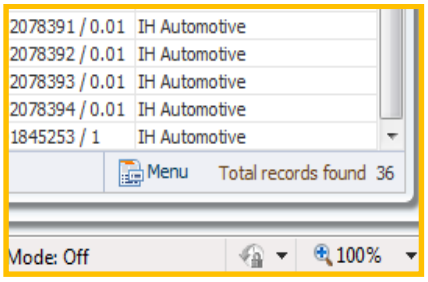
command.

Additionally, columns in the display can be turned off and/or reordered by using options in the View menu. The turned off columns will not appear in the exported file.

Context menu

In the result list you can right-click to see further options for the respective entry depending on the screen and in which IMDS context this result list is displayed. Alternatively, you can use the “Menu” option above the result list or at the bottom right to display this context menu:

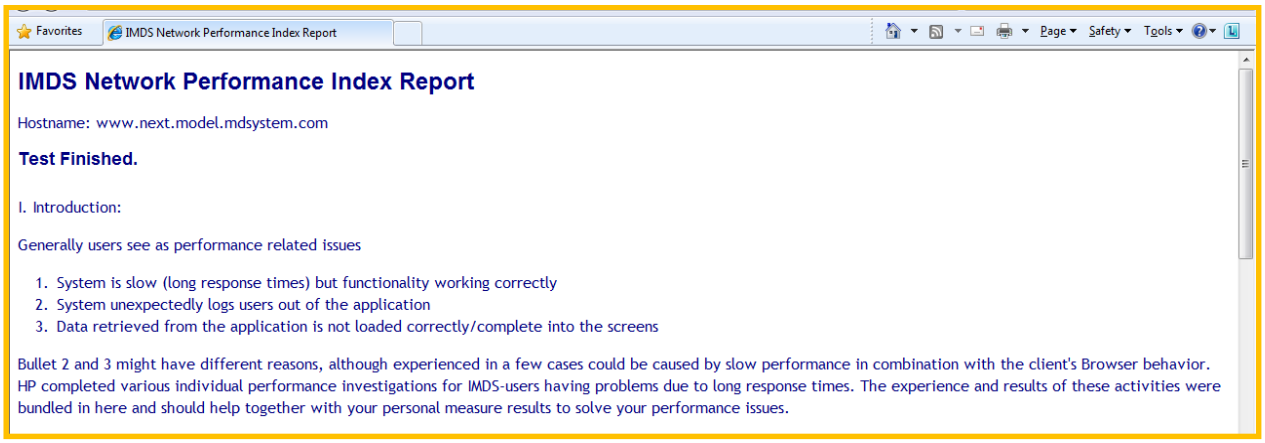




Network Performance Index

The PC internet access capacity for using the IMDS is standardized to one ISDN capacity (64 Kbit/s). If the system appears “slow” this can be due to several factors. e.g. the internet connection in your own company or the performance of the internet server of the internet service provider. For testing the performance there is a test which you can carry out yourself in the system. In the analysis, you can also see comparison values.

The “Network Performance Test“ can be found in the IMDS after log-on by clicking the “Network Performance Index“ in the Help menu. The result browser window contains the Network performance for your PC.


Favorites
IMDS Network Performance Index Report
Page
Safety
Tools
IMDS Network Performance Index Report
Hostname: www.next.model.mdsystem.com
Test Finished.
I. Introduction:
Generally users see as performance related issues
1. System is slow (long response times) but functionality working correctly
2. System unexpectedly logs users out of the application
3. Data retrieved from the application is not loaded correctly/complete into the screens
Bullet 2 and 3 might have different reasons, although experienced in a few cases could be caused by slow performance in combination with the client's Browser behavior. HP completed various individual performance investigations for IMDS-users having problems due to long response times. The experience and results of these activities were bundled in here and should help together with your personal measure results to solve your performance issues.

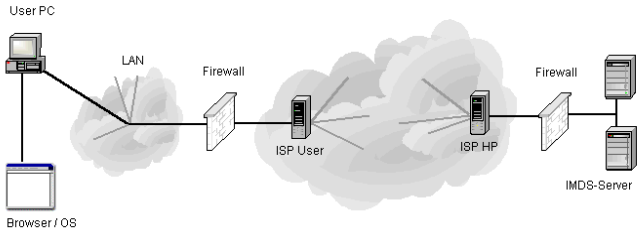
latency.
Latency (lower is better):

Test #	HTTP Version	Your Values	Comparision Values
1	1.0	31 ms	200 ms
2	1.0	31 ms	200 ms
3	1.0	31 ms	200 ms
4	1.0	47 ms	200 ms
5	1.0	31 ms	200 ms
6	1.1	47 ms	200 ms
7	1.1	47 ms	200 ms
8	1.1	31 ms	200 ms
9	1.1	31 ms	200 ms
10	1.1	47 ms	200 ms

V. Understanding the Performance-Relevant Factors:

Performance is a very complex problem which has to be looked at in every special case.

When a user is working with IMDS three major network components are involved in the data transfer. The first part consists of the local network, the internet proxy and the network line to the Internet Server Provider (ISP) of the user's company. The second part is the public Internet itself and the third part is the connection to HP's ISP and through an HP firewall until it reaches the IMDS servers. This is summed up in the following picture:



23 Glossary

Basic Substance

Basic substances are chemical elements or chemical combinations as they naturally occur or are produced. This includes all agents necessary to maintain stability. This excludes solvents which can be separated from the material without reducing its stability or changing its composition. In IMDS, every MDS "path" from the top of the tree structure must terminate in a basic substance or substances for the datasheet to be valid and allowed to be released. Most basic substances are identified by a Chemical Abstract Service (CAS) number.

Chapter

The different IMDS screen tabs for an MDS, i.e. Ingredients, Supplier Data and Recipient Information are referred to as "chapters". IMDS also contains some OEM-specific chapters.

Component

A component is an assembly or a piece part, usually assigned a lot number or part number. One component can consist of several different components, or may be composed of materials or occasionally of basic substances. In the extreme, a component can represent a complete vehicle and consist of thousands of other components.

GADSL - Global Automotive Declarable Substance List

The GADSL substance list replaced the International List of Reportable Substances (ILRS). ILRS was implemented in IMDS during 2004, and combined the different OEM requirements for reportable substances into one list. ILRS and other sources evolved to create the foundation of GADSL. In March 2005, the IMDS ILRS was replaced with GADSL.

GADSL is the work of automotive OEMs and suppliers and chemical and plastics industries who organized the Global Automotive Stakeholders Group (GASG). GASG's purpose is to facilitate communication and the exchange of information regarding substances in automotive products throughout the supply chain. The GADSL only contains substances expected to be present in a material or part remaining in a vehicle at point of sale. GADSL is independent of IMDS and has been incorporated into OEM standards since 2005. For IMDS users, this means GADSL is the only list that must be checked regarding reportable substances. Currently, all IMDS recommendations, as well as other IMDS documentation, reflect this fact.

If you have questions about GADSL or want to view the GADSL documents, please visit http://www.gadsl.org for more information.

The term "GADSL Classifications" identifies materials in GADSL requiring special handling. This should not be confused with IMDS material classifications, which identify a material grouping.

Meaning of GADSL Classification:

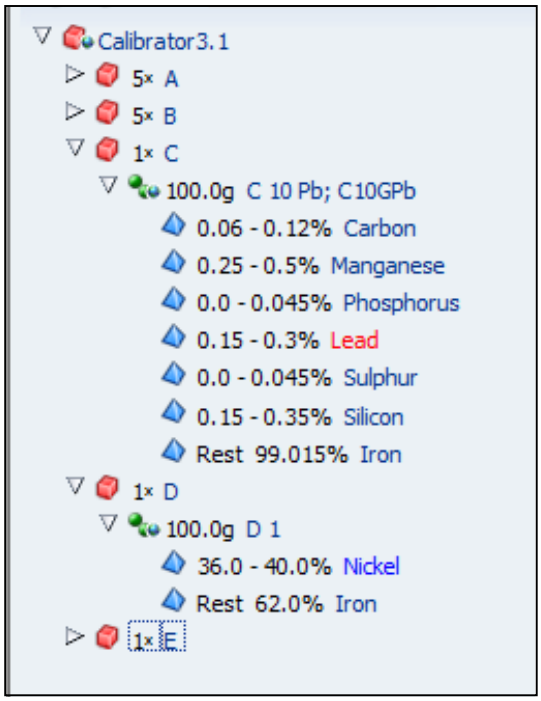
- *"P"* - Prohibited in all applications
- *"D/P"* - Prohibited in some applications and declarable in all other cases. Please review the GADSL documents for more information.
- *"D"* - Substance must always be reported, however the substance is not prohibited for use in automotive parts

Important**:** GADSL does not supersede contractual agreements between a supplier and an OEM.

Material

A material is a stable combination of basic substances in the final chemistry present in a component at the time the finished product is sold. Materials must be described in terms of basic substances. Simple components are most often composed of materials. Many users are not required to enter materials, as ideally a material is entered only by users in companies that manufacture the material, and who know 100% of the chemical composition in final form. Most materials manufactured to a public norm or standard may be found as published IMDS Committee materials, and this is the preferred source for standard materials. Some materials are not manufactured to a public norm or standard, and some public norms or standards do not describe 100% of a material's substances.

MDS (Material Data Sheet)



An MDS constitutes a complete information package for the chemistry of a finished part. An MDS always contains at least two nodes (a minimal material MDS would contain a top node and a basic substance), and may contain hundreds. MDSs are subject to revision control. If there is a data change, a new MDS version needs to be generated. If a version has been sent and accepted, it is no longer possible to make changes to the MDS without re-versioning.

An IMDS Material Data Sheet (MDS) is not the same thing as a Material Safely Data Sheet (MSDS) An MDS describes 100% of the basic substances present in a material in its final form, excluding a maximum of 10% which are attested as non-declarable or prohibited and are "masked". A Material Safety Data Sheet (MSDS) typically contains only those basic substances that are of safety concern, and often contain substances that are not present in the final form of the material. Requirements for an MDS and an MSDS are very different.

Module

A module is a streamlined MDS which may be used only within a user's IMDS company. A module contains the tree structure and all information concerning the materials and substances contained in the item, but cannot have supplier or recipient information.

Modules are subject to revision control. Once released, a module cannot be modified without re-versioning. There are three ways to create a module: via the menu item "Create... Module", as a copy of another module, or by copying part of a received or published MDS. If created via copy, a module retains information regarding the MDS from which it was copied. Users can enter additional references to other MDSs manually.

While a module is in edit mode (version *.01) it can be converted into an MDS by clicking the button "→ MDS" after performing a module search.

Node

A module or MDS consists of a tree structure with information regarding the contained components, materials and substances. Each component/material/substance represents a node in the tree structure. In the IMDS Ingredients tab, a click upon one of these nodes displays the information about this component/material/substance node to the right.

Passwords

IMDS requires a minimum of eight characters in passwords, with at least one numeric. Passwords should also contain a mixture of upper and lower case characters. A new password may be requested either using the “new password” button or from the Company Administrator, who will use the PW reset button in Administration -> User -> Profile. Passwords may not be reset twice in a row without a successful intervening login. Passwords are sent ONLY to the email address recorded for the user in their IMDS Profile, so maintaining the registered email address is essential.

There is no charge associated with an IMDS account, and no good reason for each user not to have their own ID and password. All users within the same company and Org Unit with the same privileges see the same information. There are many good reasons not to share your ID and password. All that is needed to access IMDS is a computer connected to the Internet and an ID and password. An internet computer is easily located, so it is of great importance to protect your ID and password. ID and password sharing is a violation of the IMDS Terms of Use, and is not permitted. IMDS Support Center agents may not provide help to anyone but registered IMDS Users. IMDS agents will never ask you for your password.

Process Chemicals

Process chemicals are chemicals used during the manufacturing of an item, but not present in the finished product. In IMDS, only chemicals present in the final product should be entered. Therefore, process chemicals should not be entered. Common Process chemicals are summarized in a new “Process Chemicals” basic substance group.

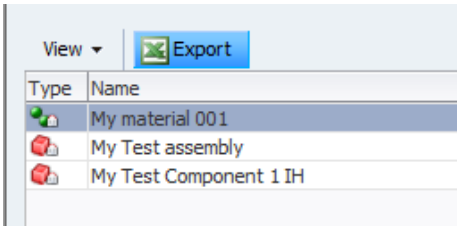
Process chemicals present in the IMDS basic substance list should be used only when contained in a final part. When the user adds a new substance to a material, a warning message will appear if the substance is contained in the Process Chemicals substance group and is present in the material above a certain limit. This limit is typically 0.1%. The user must confirm the use of the process chemical and chose a reason for its use: intended use, reaction residue or impurity.

REACH-SVHC (Substances of Very High Concern)

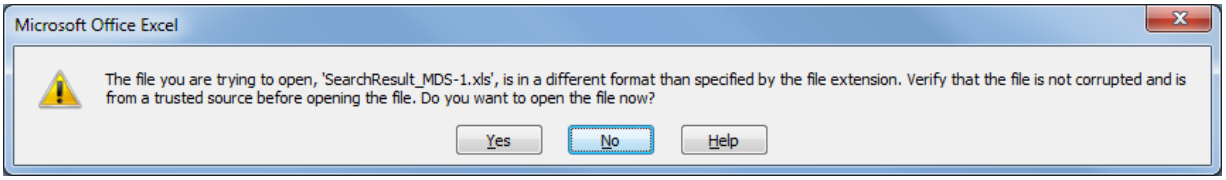
REACH-SVHC is an additional flag for Basic Substances similar to the GADSL flags "duty-to-declare" and "prohibited". User may search or filter for items containing REACH-SVHC, or analyse MDSs/Modules for contained REACH-SVHC using the certificate of expenditure screen. As all REACH-SVHC relevant for the automotive industry are added to the GADSL, the GADSL category and the flag for REACH-SVHC are displayed collectively in IMDS. In the ingredients screen, REACH-SVHC substance names are always underlined in the product structure tree, regardless of what filter is selected. All SVHCs – even if not yet part of GADSL - must not be marked confidential.

Result list Export

Several IMDS screens provide an export function.

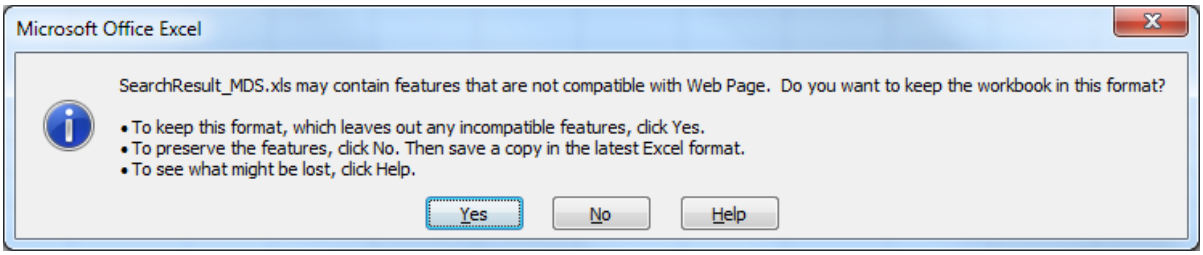


If using Excel 2007 or greater, the user may see a message similar to the following when exporting from IMDS:


Microsoft Office Excel
The file you are trying to open, 'SearchResult_MDS-1.xls', is in a different format than specified by the file extension. Verify that the file is not corrupted and is from a trusted source before opening the file. Do you want to open the file now?
Yes
No
Help

IMDS exports may be opened without any concern. To export from IMDS, click “Yes” in the message above. Once the exported information has opened in Excel, Select Save as…., and assign a file name for the exported information. Specify to save the file as the most recent version of *.xls. The file may then be manipulated in Excel. Changes will not impact the information within IMDS.

If changes are made to the file and saved without using “Save as”, the user may see a message similar to the following:


Microsoft Office Excel
SearchResult_MDS.xls may contain features that are not compatible with Web Page. Do you want to keep the workbook in this format?
• To keep this format, which leaves out any incompatible features, click Yes.
• To preserve the features, click No. Then save a copy in the latest Excel format.
• To see what might be lost, click Help.
Yes
No
Help

In most cases, users will wish to follow the instructions under the second bullet. Click “No”, and then perform a “Save as” as directed above.

Semi-Component

A semi-component is used for items when the chemistry will not change, but the item will undergo further cutting, shaping or forming before use. Semi-components are managed by unit of measure, as contrasted to components which are used in unit quantities. Examples of a semi-component include a wire cut from a spool, or paint used by the gram.

Tree Structure

In IMDS, a module is expressed graphically as an inverted tree; with a top-level “trunk” dividing into smaller “branch” content, and ultimately to individual “leaf” basic substances. The tree structure is most obvious in the structure of one or more components made of materials and ultimately basic substances, but the analogy applies for all IMDS constructs.

VDA-Publication "Materials to be declared"

The VDA ***Materials to be Declared*** - *Substances in Components and Raw Materials* publication lists substances/substance categories present in automotive materials and which, based on current knowledge, represent potential risks for man and environment. These substances appear in the list if the substance is a risk during the vehicle’s usage, in recycling and/or in disposal. This was the original list upon which IMDS was based. It has been superseded by the GADSL.

24 Contact

Choose the IMDS Service Center for your region:

Region	Office hours	Phone	E-Mail
Europe (English)	Monday – Friday 8:00h – 16:30h (GMT+1)	+36 1 2981536	imds-helpdesk-english@hp.com
Europe (French and German)	Monday – Friday 8 am – 4.30 pm (GMT+1)	+33 55 69 7860	imds-helpdesk-emea@hp.com
Americas	Monday – Friday 8:00h – 17:00h (CST)	+1 844 650 4217	imds-helpdesk-english@hp.com
Japan	Monday – Friday 9:00h – 17:00h JST (GMT+9)	+81 3 4530 9270	jpimds-helpdesk@hp.com
Korea	Monday – Friday 9:00h – 17:00 Seoul (GMT+9)	+82 221990203~4	imdsk-helpdesk@hp.com
China	Monday – Friday 9:30 am – 12:30 pm 1:30 pm – 5:00 pm BST (GMT+8)	+86 23 87431668	imds-helpdesk-china@hp.com

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